[illegible] Dome Temp. Start [illegible] Transparency Conditions [illegible]

[illegible]

[illegible] Dome Temp. Finish [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]						
			[illegible]	[illegible]							
			[illegible]	[illegible]							
			[illegible]	[illegible]	[illegible]	[illegible]					
			[illegible]	[illegible]	[illegible]						

13

Spectr. Temp. ...

Focus.........

Spectr. Temp. ...

Exp. Mtr.	Seeing

Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions ....

Focus ....

Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality

DAVID DUNLAP OBSERVATORY

74" LOGBOOK

VOL 83

PLATE NOS CC 37840 – CC 39498

DEC 1995 – MAR 1996

S #1 Fri / SAT

Date 1995 Dec 29/30 Observers Dby/Tn

Emulsion Batches:

CCD Spectr. Temp. —

Focus 6.98

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cc378 40/41	Inboard/outboard			18 18		0 20W	+41°	FeAr clear	30/45	BG39 Filter	
42	Comp							"	60s		
43	HD204867	21 26 18	-06 00 40	18 29 09		03 16 W	-5 34 S		206s	10600	
44	"	"	"	18 32 52		03 20 W	-5 34 S		230	10500	
45	"	"	"	18 37 00		03 25 W	-5 34 S		245	10300	
46	Comp							"	60s		
47	BIAS (4)										
48	Comp							"	60s		
49	HD222368	23 34 48	05 05 03	18 50 43		01 31 W	5 35 N		300s	10600	
50	"	"	"	18 56 06		01 36 W	5 35 N		300s	10900	
51	"	"	"	19 01 27		01 42 W	5 35 N		300s	10900	
52	Comp							"	60s		
53	Comp							"	60s		
54	HD6397	00 59 49	14 24 30	19 16 18		00 42 W	14 54 N		900s	10100	
55	Comp							"	60s		

CCD Spectr. Temp. —102.0 Dome Temp./Hum. -4.0°C 73.8%H Transparency Conditions Hazy but clearing up

Focus 6.98

Spectr. Temp. Dome Temp./Hum.

420 0 50 1024 4 1 CCDFAST

Comparison Filter	Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ar	30/45	BG39 Filter				CASSCCD	1800l/mm G=4475	306μ	4300Å ±2Å	3/4	focus test		MAX Adv
	60s									1/2			
	200s	10600		B3.74	G0Ib					6	Dby/Std		3.2K
	230	10500		"	"					7	"		
	245	10300		"	"					8	"		
	60s									9			
										1/2			
	60s									10			
	300s	10600		B5.04	F7V					11	Std. Vel.		
	300s	10900		"	"					12	"		
	300s	10900		"	"					13	"		
	60s									14			
	60s									15			
	900s	10100		B6.09	F4II-III					16	Dby		
	60s									17			

#2 Fri/Sat

Date 1995 Dec 29/30 Observers Dby / Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr. BG39 Filter	Seeing
CC37856	HD6397	00 59 49	14 24 30	19 35 40		0 59W			817s	10200	2.4"
57	Comp							FeAr Clear	60s		
58	HD6397	00 59 49	14 24 30	19 52 22		01 16W	14 54N		800s	10350	
59	Comp							"	60s		
60	Bias (4)										
61	Comp.							"	60s		
62	HD216131	22 45 11	24 04 05	20 15 59		03 44W	24 35N		164s	10300	
63	"	"	"	20 19 12		03 47W	24 35N		167s	10400	
64	"	"	"	20 22 28		03 50W	24 35N		170s	10300	
65	Comp							"	60s		
66	Comp										
67	HD8890	1 22 34	88 46 26	20 37 51		00 16W	89 14N		66s	12300	
68	"	"	"	20 39 15		00 18W	"		66s	12300	
69	"	"	"	20 40 37		00 19W	"		65s	12400	
70	Comp							"	60s		
71	Bias(4)			20 44							

CCD Temp. ...

Focus ... 6.98

Spectr. Temp. ...

~~Spectr.~~ CCD Temp. -102.0°C   Dome Temp./Hum. -3.9, 74.12   Transparency Conditions Hazy

Focus 6.98

Spectr. Temp. ....   Dome Temp./Hum. ....

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
817s	BG 39 Filter 10200	2.4"	B 6.09	F4II-III	CASS CCD	1800 l/mm G = 4475	306	4300Å ±2Å	18	Dby		MAX ADU 4K
60s									19			
800s	10350		B6.09	F4II-III					20	Dby		3.7K
60s									21			
									1/2			
60s									22			
164s	10300		B4.41	G8III					23	Dby/Std	(deep band at ≈ 4300Å much deeper than the others)	
167s	10400		"	"					24	"		
170s	10300		"	"					24	"		3.4K
60s									25			
									26			
66s	12300		B2.62 F7Ib-IIV						6	Dby		
66s	12300		"	"					6	"		7.5K
66s	12400		"	"					6	"		
60s									9			
									1/2			

9#30 Fri./Sat.

Date 1995 Dec. 29/30 Observers Dby / Tn

Emulsion Batches:

CCD ~~Spectr.~~ Temp. -7…

Focus….6.98…

Spectr. Temp. …

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC37872	Comp							FeAr Clear	60s	3639 Filter	
73	HD 45947	6 25 17	73 46 22	20 54 21	~~3 00 E~~	03 00 E ~~73 41 N~~			1487s	10160	<2"
74	Comp							"	60s		
75	HD45947	6 25 17	73 46 22	21 23 41	~~2 27~~ E	2 27E			1948	≈10K	2.3"
76	Comp							"	60s	Exp Meter unre…	
77	HD45947	6 25 17	73 46 22	22 04 22	~~1 41E~~	1 .41E			2230	27K	
78	Comp							"	60s		
79	Bias (4)			22 44 23							
CG80286/289	HD35476	5 19 54	43 55					4x	67ms		2"
CG80 290/291	"							2x	133ms		
CC378 80/88	FLATS x 9					0 13E	+44°	Tung clear	33s		
cc 37889	Comp							FeAr Clear	60s		
90	HD61295	7 33 30	32 14 20	00 55 56		09 59E	+32°		2303s	10000	2.3"
91	Comp							FeAr clear	60s		
92	HD61295	07 33 30	32 14 20	01 37 50		00 47W	+32°		1933s	10144	

~~Spectr.~~ CCD Temp. -102°C . . . . Dome Temp./Hum. -4.6, 74:92 Transparency Conditions . . Hazy - some cloud 10
increasing cloud

Focus . . . . 6.7.8 . . . .

Spectr. Temp. . . . . Dome Temp./Hum. . . . .

Companion Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
ear	60s	BG 39 Filter				CASS CCD	1800/l/mm θ =4475	306µ	4300 Å ± 2Å	10			Max Adu
	1487s	10160	< 2"	6.62"	F2					11	Dby		4.0K
	60s									14			
	1948	≃ 10K	2-3"	B 6.62	F2					16	Dby	SP control failure during exp	4.4K
	60s	Exp meter unreliable at Times due to shutter problem								17		∴ Delayed comparison	1.1K
	[illegible]	≃ 7K		6.62	F2					18	Dby		3.2K
	60s									19			
										1/2			
[illegible]	6ms		2"	ALT = 87°			Above 306µ slit				Seeing test	No Fans, Dome WNW	
[illegible]	5ms			V 7.48	K0 III						" "	Medium west wind	
[illegible]	33s									2			13.2K
ear	60s									21			950
	2035s	10 000	2-3"	B 6.52	F6 II					22	Dby	Part cloudy/drifting in-out	
[illegible]	60s									25			
	1833s	10144		B 6.52	F6 II					6	Dby	cloudy	

11# 4 Fri/Sat.

Date 1995 Dec 29/30 Observers Dby/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC37893	Comp							FeAr Clear	60s
94	HD61295	07 33 30	32 14 20	02 13 16		01 12 W	32° N		1367s
95	Comp							"	60s
96	Bias (4)			02 40					
97	Comp							"	60s
98	HD 61035	07 32 11	24 35 05	02 44 36					865s
99	Comp							"	60s
cc37900/01	Inboard/outboard					1 40W	+24°	FeAr Clear	60/90

~~Spectr.~~ CCD Temp. -103.2 Dome Temp./Hum. -5.3, 77.3% Transparency Conditions Hazy - Cloudy

Focus 6.98

Spectr. Temp. Dome Temp./Hum. -5.5°c 77.5%H

Comparison Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60s	BG 39 Filter				CASS CCD	1800/l/mm G=4475	306u	4300Å ± 2Å	9			Max Adu
1367s	10200		B 6.52	F6II					11	Dby	centred around 17th pixel	3.4K
60s									14			
									1/2			
60s									15			
805s	4100	2"	B 6.24	FO					16	Dby	Clouded over real fast.	
60s									17			
60s	T = -5.5°C			F=6.98					27/28	focus		

Pg #1 [13] [Wed / Thur]

Date 1996 January 3/4 Observers {Vys}/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 37902/3	INBOARD/OUTBOARD							FeNe clear	20/30
04	BIAS x 4			17 55					—
05	COMP							"	20
06	BD+40 45	00 11 52	+40 23 33	18 08 22		0 45 W			1200
07	COMP							"	20
08	COMP							"	20
09	HD 1326	00 12 42	+43 27	18 37 58		1 09 W			915
10	COMP							"	20
11	BIAS x 4			18 55					—
12	COMP							"	20
13	AC-06 2360-60	01 58 29	-05 23 23	19 09 08		0 21 W			2460
14	COMP							"	20
15	BIAS x 4			19 55					—
16	COMP							"	20
17	Vys 396B	02 30 52	+06 24 57	20 02 02		0 44 W			2650
18	COMP							"	20

CCD Temp.
Focus 7.0
Spectr. Temp.

Exp. Mtr.	Seeing
[illegible] 39 [illegible]TER ([illegible]) ([illegible] NEEDS) ([illegible])	
[illegible] LOOK <1000	4.5"
850	4.5"
[illegible]65	5"
[illegible]27	4.5"

~~Spectr.~~ CCD Temp. -100.5°C Dome Temp./Hum. -12.7°C / 52.8% @ focus test Transparency Conditions clear, a bit of haze. !! avoiding near-full moon.

Focus 7.05

Spectr. Temp. .... Dome Temp./Hum. ....

FANS OFF

420 0 50 1024 4 1 ccdfnt

Comparison Filter Exp	Exp. Mtr.	Seeing	V ~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
[illegible]/30	BG 39 FILTER				CASS CCD	1800 l/mm G=5160	306μ	5305Å	3/4	focus test	set cool but T should drop overnight.	
–	(STUCK IN THERE SLIDE NEEDS LUBRICATION)								1			
20									5			
1200	DIDN'T LOOK! <1000	4-5"	9.00	M0					6	Marcy Std Velocity	V_{4}s 84	1 K
20									7			
20									8			
915	850	4"-5"	8.07	M1 $\overline{V}$e					9	Marcy Std Velocity	V_{4}s 85A	1.4 K
20									10			
–									1			
20									11			
[illegible]	465	5"	11.2	M					12	{V_{4}s}, RV	V_{4}s 385, 1st in haze,	200 [illegible] b/g
20									13			
–									1			
20									14			
[illegible]	427	4"-5"	11.66	M					15	{V_{4}s} RV	bright 6m K0 star off field of view to NW.	200 [illegible] b/g
20									16			

1S
pg#2

Date 1996 January 3/4 Observers {V4s}/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc37919	BIAS x 4			20 50					—
20	COMP							FeNe clear	20
21	AC+55 19225	02 49 12	+55 02 32	20 59 15		1 28 W			3050
22	COMP							"	20
23	BIAS x 4			21 53					—
24	AC+55 19224	02 49 10	+55 02 14	21 54 43		2 13 W			2406
25	COMP							"	20
26	BIAS x 4			22 37					—
27	COMP							"	20
28	AC+53 2250-45	03 49 06	+53 16 23	23 22 11		2 24 W			1400
29	COMP							"	20
30	BIAS x 4			23 48					—
31 - 33	FLAT x 3							Tung ½ Ap	6
34	BIAS x 4			1 21					—
35	COMP							FeNe clear	20

~~Spectr.~~ CCD Temp. -100.2°C Dome Temp./Hum. -14.4°C/53.6% Transparency Conditions clear, nearly full moon rising, some clouds 16

Focus 7.05 FANS OFF

Spectr. Temp. …… Dome Temp./Hum. …… 420 0 50 1024 4 1 coadd ?

Comparison Exp	Exp. Mtr.	Seeing	V Mag.	Sp.	Inst.	Grating/Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
–	BG 39 FILTER (STUCK)				CASS CCD	1800 ℓ/mm G=5160	306μm	5305 Å	1			
20									17			
3050	435	4" →5"	11.2	M0					18	{Vys} RV	Vys 410B, 2nd brightest and most-northernly of triple system.	180 above bkg
20									19			
–									1			
2406	492	5"	10.5	M0					20	{Vys} RV	Vys 410A, brightest of 3	350 above bkg
20									21			
–									1		failed attempt at AC+80 7 (Vys 354A)	
20									22			
1400	~150*	4"	10.5	M0					23	{Vys} RV	Vys 226 * probably lots of sky counts	~80 above bkg
20									24			
–									1			
6									25		cloudy break, close.	12.8K →12.3K
–									1			
20									26			

pg #3 [17]

Date 1996 January 3/4 Observers {Vys}/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC37936	BD+27 1348	07 10 07	+27 19 08	01 29 25		1 39 W			3000
37	COMP							FeNe clear	20
38	BIASx4			02 22					—
39	COMP							"	20
40	AC+47 256-150	07 15 58	+46 16 52	02 28 39		2 31 W			3000
41	COMP							"	20
42	BIASx4			03 21					—
CG80292-5	HD87822 x4	10 02 29	+32 05 42						.067
96-97	" x2				3 31	0:01:22 W	78° Alt	1.0233 airmass	.133
CC37943	COMP							FeNe clear	20
44	HD95735	10 57 54	+36 38	03 41 43		0 30 E			610
45	COMP							"	20
46/47	INBOARD/OUTBOARD							FeNe clear	20/30

Spectr. Temp.
Focus 7.0
Spectr. Temp.

Seeing	
627*	5"
623	4-7"
	7-8"
710	1'

~~Spectr.~~ CCD Temp. -100.3 °C Dome Temp./Hum. -17.5°C / 58.2% Transparency Conditions some clouds, near full moon past meridian now.

Focus 7.05 FANS OFF

Spectr. Temp. .... Dome Temp./Hum. -19.0°C / 59.7% @ end of seeing test

420 0 50 1024 4 1 coolfast

Comparison Exp	BG 39 FILTER (STUCK) Exp. Mtr.	Seeing	√ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
3000	627*	5"	10.9	M0	CASS CCD	1800ll/mm G=5160	30µm	5305Å	27	{V4s} RV	V4s 490, close to moon. *	230 above bkg
20									28			
–									1			
20									29			
3000	623	4"-7"	10.5	M2					30	{V4s} RV	V4s 493, star drifted quite a bit	200 above bkg
20									31			
–									1			
.061		7"-8"	6.60	F5	EEV CCD TV GUIDER		above 30µm		–	seeing test	Dome SW, lite W wind. clear, full moon setting now	
.123									–	"	bad seeing. ooops, dim base lights on	
20					CASS CCD	as before	seeing test.		5			
[illegible]	770	7"	7.48	M2					6	Marcy Std Velocity	V4s 594	
20									7			
20/30									3/4	focus test	T dropped 6.5°C to -19.2°C overnight.	

[19]pg #1 [Thu / Fri]

Date 1996 January 4/5 Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
c CC37948/49	INBOARD/OUTBOARD							Fe Ar clear	40/70
50	BIAS(4)								—
51	COMP							"	60
52	HD204867	21 26 18	-06 00 40	17 59 57		3 14 W			388
53	~~COMP~~ COMP							"	60
54	HD204867			18 10 07		3 20 W			176
55	"			18 13 21		3 23 W			150
c 56	"			18 16 09		3 26 W			160
57	COMP							"	60
c 58	COMP							"	"
59	HD216131	22 45 11	+24 05 25	18 26 25		2 17 W			140
60	"			18 29 04		2 20 W			140
61	"			18 31 41		2 23 W			155
62	COMP							"	60
63	BIAS(4)			18 37					—

CCD Spectr. Temp. -102.3°C Dome Temp./Hum. -13.3°C / 63.6% Transparency Conditions Clear, full moon rising

Focus 7.12 @ focus test

FANS ON

Spectr. Temp. -100.2°C Dome Temp./Hum.

420 0 50 1024 4 1 ccdt

Companion Filter	Companion Exp.	Exp. Mtr.	Seeing	(B) Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
Ar lamp	40/70	BG 39 FILTER				CASS (CI)	1800 l/mm G = 4475	306µm	4300 Å	3/4	focus test	in focus, pretty much	
	-								I .5 Å at most	1			
	60									5			
	388	shutter stuck	3"-4"	3.74	G0Ib					6	Dby & Std Vel	thick haze, dawn haze or just shutter problem	8K
	60									7			
	176	13K		3.74	G0Ib					8	"	over 2 cols →	3K
	150	12K		"	"					9	"	one col. →	3.4K
	160	12K		"	"					8	"	over 2 cols →	2.7K
	60									10			
	-									11			
	140	11.6K	3"	4.41	G8III					12	Dby Sp. Std.		5K
	140	11.1K		"	"					13	"		4.2K
	145	12.0K		"	"					12	"		
	60									14			
	—									1			

2pg #2

Date 1996 January 4/5 Observers Dby/Smt

Emulsion Batches:

Spectr. Temp. ...

Focus ... 7.12

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC37964	COMP							FeAr clear	60	3a 39 FLTR	
65	HD6397	00 59 49	+14 24 30	18 42 34		0 27 W			660	10.9K	3"-4"
66	COMP							"	60		
67	HD6397			18 56 49		0 41 W			630	10.3K	
68	COMP							"	60		
69	HD6397			19 10 09		0 54 W			629	0.5K	
70	COMP							"	60		
71	BIAS (4)			19 23					–		
72	COMP							"	60		
73	HD222368	23 34 48	+05 05 03	19 28 21		2 30 W			205	10.3K	3"
74	"			19 32 04		2 34 W			235	0.2K	
75	"			19 36 17		2 43 W			451	0.2K	
76	COMP							"	60		
77	Comp							"	60		
78	HD8890	01 22 44	88 46 26	20:02:46		6 46 W			66	3K	

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. -13.5°C/68.3% Transparency Conditions Clear, full moon rising 22

Focus 7.12 FAN 5 ON

Spectr. Temp. Dome Temp./Hum. 420 0 50 1024 4 1 ccdflat

Comparison Exp.	Exp. Mtr.	Seeing	(B) Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60	BG 39 FILTER				CASS CCD	1800 l/mm G=4475	30µm	4300 Å	15			
660	10.9K	3"-4"	6.09	F4 II-III					16	Dby		4.7K
60									17			
630	10.3K		"	"					18	Dby		4.9K
60									19			
629	10.5K		"	"					20	Dby	new 2cd	4.4K
60									21			
–									1			
60									22			
225	10.3K	3"	5.04	F7 V					23	Std. Vel		3.7K
1235	10.2K		"	"					24	"	thin cloud	3.2K
451	10.2K		"	"					25	"	thicker cloud	3.5K
60									26			
60									27			
66	12K		2.62	F7 Ib-II V					28	Dby		

[23] pg #3

Date 1996 Jan 4/5 Observers Dby / Smt

Emulsion Batches:

CCD Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc37979	HD8890	01 22 34	88 46 26	20 04 08		8 30W			55	2000	
80	"	"	"	20 05 20		9 27W			50	129K	
81	Comp							FeAr Clear	60		
82	Bias (4)			20 14							
83	Comp							"	60		
84	HD10494	01 37 18	61 21 00	20 19 03		1 43 W			1800	1470	3"
85	Comp							"	60		
86	~~HD10494~~ COMP							"	60		
87	HD20902	3 17 11	+49 30 19	21 01 46		0 17 W			378	11K	3"
88	"	"	"	21 03 03		0 25 W			440	10.5K	
89	COMP							"	60		
90	HD20902	3 17 11	+49 30 19	21 15 13		0 40 W			595	128K	
91	COMP							"	60		
92	BIAS (4)								—		
37993-38002	FLAT x 10					0	−18°	Tung clear	33		
03	Bias (4)			00 04					—		

~~Spectr.~~ CCD Temp. -100.3 °C Dome Temp./Hum. -13.1 / 70.69 Transparency Conditions Clear, full ~~moon~~ 24

Focus 7.12 Fans on (N only now) → cloud → snow

Spectr. Temp. Dome Temp./Hum.

420 0 50 1024 # 1 cont fit

Exp. Mtr.	Seeing	(B) Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
12000		2.62	F7Ib-II V	CASS CCD	1800 l/mm G=4475	30 µm	4300 Å	29	Dby		5.5K
12.9K		"	"					30	"		6.4K
								31			
								1/2			
								5			
4470	3"	8.52	F5Ia					6	Std. (Sp.)		1.2K
								7			
								7			
11 K	3"	2.27	F5Ib					8	Dby Sp. Std α Per	in and out of thick cloud.	
10.5K		"	"					9	" "	thick cloud, most signal in last minute	
								10			
12.8K		"	"					9	" "	mostly cloud exposure. All signal in ~30s	
								10			
								1			
								2		dome closed snow	13.5K → 12.5K
								1/2			

25
pg. #4

Date 1996 Jan. 4/5 Observers Dby/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 38004	Comp							FeAr Clear	60s
05	HD36673 (struck out: [illegible])	05 28 19	-17 53 38	00 05 35		01 13 E			80s
06	"	"	"	00 07 11		01 14 E			70s
07	"	"	"	00 08 46		01 16 E			70s
08	Comp							"	60s
09	Comp							"	60s
10	HD54605	07 04 20	-26 14 04	00 18 56		00 09 E			55s
11	"	"	"	00 20 06		00 07 E			60s
12	"	"	"	00 21 19		00 06 E			70s
13	Comp							"	60s
14	Comp							"	60s
15	HD61035	07 32 11	24 35 05	00 31 13		00 04 W			1303s
16	Comp							"	60s
17	HD61035	07 32 11	24 35 05	00 56 49		00 19 W			1300s
18	Comp							"	60s

CCD
Spectr. Temp. ...
Focus 7:1
Spectr. Temp. ...

Exp Mtr	Seeing
.2K	5-6"
1.1K	
1.7K	
1.5K	7"
0.8K	
0.8K	
10.3K	5"
10.1K	

~~Spectr.~~ CCD Temp. -100.3°C Dome Temp./Hum. -13.5 / 71.7% Transparency Conditions Clear, again ~~[illegible]~~ Moon bright 26

Focus 7:12 Fans on (N only)

Spectr. Temp. Dome Temp./Hum.

420 0 50 1024 ~~#~~ 1 ccdfmt

Companion Filter	Companion Exp	Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	60s			?		CASS CCD	1800 l/mm G = 4475	306µ	4300 Å	11		seeing quality really diminished after clouds passed through	
	80s	12K	5-6″	2.79	F0Ib					12	Dby/Std		5K
	75s	11K		"	"					13	"		
	75s	11.?K		"	"					14	"		4.3K
	60s									15			
	60s									15			
	55s	11.5K	7″	2.52	F8Ia					16	Dby/Std		3.9K
	60s	10.8K		"	"					17	"		2.8K
	70s	11.8K		"	"					16	"		3.0K
	60s									19			
	60s									21			
	150s	10.3K	5″	B 6.24	F0					22	Dby		
	65s									26			
	150s	10.1K		6.24	F0					27	Dby		3.5K
	60s									26			

27
pg#3

Date 1996 Jan 4/5 Observers Dby / Smt

Emulsion Batches:

CCD ~~Spectr.~~ Temp.
Focus 7.12
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC380 19	HD61035	07 32 11	+24 35 05	01 21 49		00 45 W		½	1310s	10.1K	
20	Comp							FeAr Clear	60s		
21	Bias (4)			1 46					—		
22	Comp							"	60s		
23	HD62140	07 37 24	+63 04 18	01 53 02		1 11 W			1455	10.4K	
24	COMP							"	60		
25	HD62140			02 21 22		1 37 W			1365	10.2K	5"
26	COMP							"	60		
27	HD62140			02 47 18		2 08 W			1609	10.3K	5-6"
28	COMP							"	60		
29	BIAS (4)			03 20					—		
30	Comp							"	60		
31	HD61295	07 33 30	+32 14 20	03 26 01		2 53 W			1602	10.2K	6"
32	COMP							"	60		
33	HD61295			03 56 15		3 10 W			1270	11K	

~~Spectr.~~ CCD Temp. -100.3 Dome Temp./Hum. -15.3/ 71.4% Transparency Conditions Clear, ~~Bright milk~~

Focus 7.12 Fans on (N. only)

Spectr. Temp. .... Dome Temp./Hum. ....

420 0 50 10204 /ccdfit

Comparison Exp	Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1310s	10.1K		6.24	FO	CASS CCD	1800 l/m G=4475	30	4300Å	22	Dby		
60s									21			
–									1			
60s									26			
1455	10.4 K		6.75	FO p SrEu					27	Dby		37K
60									28			
1365	10.2K	5"	"	"					29	Dby		
60									30			
1609	10.3K	5"-6"	"	"					31	Dby		
60									32			
–									1/2			
60									5			
1602	10.2K	6"	6.52	F6II					6	Dby		
60									7			
1370	10K								8	Dby		

pg. #6

Date 1996 Jan. 4/5 Observers Dby/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC380 34	Comp							FeAr Clear	60s		
35	HD61295	07 33 30	+32 14 20	04 21 09		3 50 W			1740s	10.2K	
36	Comp							"	60		
37	Bias(4)			4 52							
38	Comp							"	60		
39	HD60335	07 28 54	+43 15 03	04 57 32		4 17 W			900s	2400	8"
40	COMP							"	60		
41/42	INBOARD/OUTBOARD					0	+40°	"	40/70		

Spectr. Temp. -101.1 Dome Temp./Hum. -16.2/ 73.8% Transparency Conditions Clear, Bright moon 30

Focus 7.12 N. fan on

Spectr. Temp. Dome Temp./Hum. -15.9°C/73.8% @ focus test

420 0 50 1024 4 ccd fmt

Comparison Filter Exp	Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
ar 60s					CASS CCD	1800 l/m G= 4475	306 μ	4300Å	10			
174s	10.2 K		6.52	F6II					12	Dby	a bit of cloud	
60									11			
									1/2			
60									14			
900	2400	8"	6.33	F0		S/N ~ 90:1			15	Dby	a bit of cloud again. thick clouds coming	750 above b/g
60									18		cut short — SNOW	
40/10									3/4	focus test	dome closed	

3pg #1 [Fri / Sat]

Date 1996. January 5/6. Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38043/44	INBOARD/OUTBOARD					0	+45°	Fe-Ar clear	40/20
45	BIAS (4)			17 43					—
46	COMP							"	60
47	HD 204867	21 26 18	+6 00 40	17 56 49		3 10 W			180
48	"			18 00 12		3 14 W			180
49	"			18 03 33		3 18 W			208
50	COMP							"	60
51	Comp							"	"
52	HD216131	22 45 11	24 04 25	18 14 18		2 10 W			240s
53	"	"	"	18 18 34		2 14 W			230s
54	"	"	"	18 22 38		2 18 W			210s
55	Comp							"	60s
56	Comp							"	60s
57	HD222368	23 34 48	+05 05 03	18 38 23		1 46 W			300
58	"			18 43 56		1 51 W			270
59	"			18 48 55		1 56 W			300

32

~~Spectr.~~ CCD Temp. -106.2°C Dome Temp./Hum. -15.3°C/55.8% Transparency Conditions clear, full moon just rising

Focus 7.12

FANS OFF

Spectr. Temp. Dome Temp./Hum.

420 0 50 1024 4 1 ccdfast

Comparison Filter Exp	Exp. Mtr.	Seeing	β Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
40/20	Bg 39 FILTER				CASS CCD	1800 l/m G=4481	3dsm	4300 Å	3/4	focus test		
—								± .5Å at very most	1			
60									5		spec. controller failed before this exp.	
180	10.5 K	7"+	3.74	G0Ib					6	Sp. Std & Std Vel		2.2K
180	11.0K	>8"							7	"		2.2K
120	11.4K								6	"		2.0K
60									8			
"									9			
240s	10.4K	8"	4.41	G8III					10	Sp.Std.		
230s	10.7K	7"	"	"					11	"		2K
200s	10.5K	6"	"	"					10	"		2.9K
60s									12			
60s									13			
300	10.5K	6"	5.04	F7V					14	Std. Vel		
270	10.5K	5"							15	"		
300	10.0K	6"							14	"		

33
pg #2

Date 1996 January 5/6 Observers Dby / Smt

Emulsion Batches: -

~~Spectr.~~ Temp. ...
Focus ... 7.1
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC38060	COMP							FeAr clear	60	R=39 FILTER	
61	BIAS(4)			18 56					—		
62	COMP							"	60		
63	HD6397	0 59 49	+14 24 30	1906 38		1 00 W			1000s	10.3K	
64	Comp							"	60s		
65	HD6397	"	"	19 27 19		1 20 W			910s	10.3K	
66	Comp							"	60s		
67	HD6397	"	"	19 46 44		1 39 W			900s	10.4K	
68	Comp							"	60s		
69	Bias (4)			20 04					—		
70	Comp							"	60		
71	HD10494	01 37 18	61 21 00	20 16 49		1 45 W			1800s	3912	
72	Comp							"	60s		
73	HD10494	"	"	20 50 55		2 25 W			2120	4115	
74	COMP					2 59 W		"	60		
75	HD10494	"	"	21 29 08		↓			1825	4110	

~~Spectr.~~ CCD Temp. -100.3°C Dome Temp./Hum. -17.3°C/58.1% Transparency Conditions clear, full moon rising

Focus 7.12

Spectr. Temp. .... Dome Temp./Hum. ....

FANS OFF

420 0 50 1024 4 1 ccdfmt

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60	BG 39 FILTER				CASS CCD	1800 l/mm G=4481	30µ	4300 Å	16			
–									1			
60									17			
1000s	10.3K		6.09	F4II-III					18	Dby		
60s									19			
900s	10.3K		"	"					20	Dby		
60s									21			
900s	10.4K		"	"					22	"		
60s									23			
–									1			
60									24			
1000s	3912		8.52	F5Ia					25	Sp. Std.		
60s									26			
420	4115		"	"					27	"		Two along slit
60									28			
180s	4300		"	"					29	"		

35 pg 3

Date 1996 January 5/6 Observers D.by / Smt

Emulsion Batches: ....

Spectr. Temp. ... Focus ....7.1 Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38076	COMP							FeAr clear	60		
77	BIAS(4)			22 03					—		
78	COMP							"	60		
79	HD29737	04 35 57	-24 40 40	22 12 02		0 41 W			1600	10.1K	5-6"
80	COMP							"	60		
81	HD29737	"	"	22 41 53		1 10 W			1470	10.1K	
82	Comp							"	60		
83	Bias (4)			23 09					—		
84	Comp							"	60		
85	HD36673	05 28 19	-17 53 38	23 14 43		0 26 W			64	11.0K	5-6"
86	"			23 16 14		0 27.5W			60	12.1K	
87	"			23 17 47		0 29 W			60	11.9K	
88	COMP							"	60		
89	COMP							"	"		
90	HD54605	07 04 20	-26 14 04	23 26 17		0 58 E			60	12.5K	5"

CCD ~~Spectr~~. Temp. -100.4°C Dome Temp./Hum. -17.3°C / 63.5% Transparency Conditions clear, full moon rising still 36

Focus 7.12 FANS OFF

Spectr. Temp. Dome Temp./Hum. 420 0 50 1024 4 1 ccdfit.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
Ar Ar	60					CASS CCD	1800 l/mm G=4481	306µ	4300 Å	30			
	–									1			
	60									31			
	1600	10.1K	5"-6"	6.50	G6III					~~32~~ 6	Sp. Std.		
	60									8			
	1470	10.1K		"	"					7	Sp. Std.		
	60									9			
	—									1			
	60									12			
	64	11.0K	5"-6"	2.79	F0Ib					14	Sp. Std.		
	60	12.1K								15	"		
	60	11.9K								18	"		6.9K
	60									16			
	"									17			
	60	12.5K	5"	2.52	F8Ia					20	Sp. Std.		

37 pg #4

Date 1996 January 5/6. Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc38091	HD54605	07 04 20	-26 14 04	23 27 41		0 56 E			60
92	"			23 29 10		0 55 E			75
93	COMP							FeAr clear	60
94	Comp							"	"
95	HD20902	03 17 11	+49 30 19	23 44 12		3 04 W			60
96	"			23 45 36		3 05 W			30
97	"			23 46 40		3 06 W			30
98	COMP							"	60
99	Comp							"	"
cc38100	HD60335	07 28 54	+43 15 03	01 00 39		0 33 E			1150
01	Comp							"	60
02	HD60335			00 22 40		0 08 E			1051
03	Comp							"	60
04	HD60335	"	"	00 46 38		0 11 W			1020
05	Comp							"	60
06	Bias(4)			01 10					—

CCD ~~Spectr.~~ Temp. -102.0°C Dome Temp./Hum. -17.7°C / 64.3% Transparency Conditions clear, full moon approaching meridian. 38

Focus 7.12

Spectr. Temp. .... Dome Temp./Hum. ....

420 0 50 1024 4 1 ccdflat.

Comparison Filter	Comparison Exp.	BG 39 Exp. Mtr. FILTER	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	60	11.9K	6"	2.52	F8Ia	CASS CCD	1800 l/mm G=4481	30μm	4300Å	22	Sp. Std		
	75	13.3K								25	"		
r ar	60									23			
	"									24			
	60	12.4		2.27	F5Ib					27	Sp. Std		
	30	18 K								29	"		
	30	16 K								27	"		10.7K
	60									28			
	"									30			
	1150	10.2K	5"	6.33	F0					6	Dby F-star pgm		
	60									8			
	1051	10.3K		"	"					7	"	(Spect. Chlor failed after readout.)	
	60									9			
	1030	10.3 K		"	"					10	"		
	60									12			
	~									1			

39
pg #5

Date 1996 January 5/6 Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC38107	Comp							FeAr Clear	60s
08	HD61295	07 33 30	32 14 20	01 14 15		00 35 W			1060
09	Comp							"	60
10	HD61295	"	"	01 35 30		00 56 W			1070
11	Comp							"	60
12	HD61295	"	"	01 56 37		01 17W			1020
13	Comp							"	60
14	Bias (4)			02 17					—
15	Comp							"	60
16	HD61035	07 32 11	+24 35 05	02 25 06		01 51W			1215
17	COMP							"	60
18	HD61035	"	"	02 48 05		02 15W			1260
19	Comp							"	60
20	HD61035	"	"	03 11 50		2 39 W			1200
21	Comp							"	60
22	Bias(4)			3 35					

CCD Temp.
Focus
Spectr. Temp.

Exp Mtr	Seeing
36 39 Filter	
0.3K	
1.1K	
0.3K	
0.2K	5"
0.2K	
.5K	

~~Spectr.~~ CCD Temp. -100·1°C Dome Temp./Hum. -18·2°C, 64·39 Transparency Conditions Clear, full moon past meridian now

Focus 7·12

FANS OFF 40

Spectr. Temp. .... Dome Temp./Hum. ....

420 0 5 0 1024 4 1 ccdfmt

Comparison Filter	Exp	Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	~~Emulsion~~ C Camera	P.H.	Program	Remarks	Quality
Ar	60s	BG 39 Filter				CASS CCD	1800 ℓ/mm G = 4481	306μ	4300Å	13			
	1060	10·3K		6·52	F6 II					14	Dby	close to full moon	
	60									16			
	1070	11·1K		"	"					15	Dby		
	60									16			
	1020	10·3K		"	"					17	Dby	Spect. Controller died after ~~readout~~	
	60									19			
	—									1			
	60									19			
	1215	10·2K	5"	6.24	F0					20	Dby	very close to full moon.	
	60									21			
	1260	10·2K		"	"					22	"		3·7K
	60									23			
	1200	10·5K		"	"					20	"		
	60									21			
										1			

4
py #6

Date 1996 January 5/6 Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38123	COMP							Fe-Ar clear	60
24	HD89025	10 11 08	+23 54 57	3 43 49		0 12 W			90
25	"			3 45 49		0 14 W			90
26	"			3 47 49		0 16 W			90
27	COMP							"	60
28	Comp							"	"
29	HD83808	9 35 49	+10 20 50	3 57 55		1 02 W			100
30	"			4 00 09		1 04 W			110
31	"			4 02 34		1 07 W			110
32	COMP							"	60
33	Comp							"	60
34	HD77601	8 58 30	+48 55 40	4 13 20		2 01 W			580
35	COMP							"	60
36	HD77601			4 25 41		2 15 W			640
37	COMP							"	60
38	HD77601			4 39 23		2 28 W			600

CCD Temp. –
Focus 7.1
Spectr. Temp.

Exp Mtr	Seeing
5639 FILTER	
11.7K	3"-4"
5K	
1.1K	
10.7K	
11.0K	
[illegible].0K	4"
10.6K	
10.2K	
10.3K	

~~Spectr.~~ CCD Temp. −100.5 °C Dome Temp./Hum. −18.2°C/66.7% Transparency Conditions clear, full moon setting

Focus 7.12 FANS OFF

Spectr. Temp. .... Dome Temp./Hum. .... 420 0 50 1024 4 1 ccdfmt

Comparison Filter / Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60	BG 39 FILTER				CASS CCD	1800 ll/mm G = 4481	306µ	4300 Å	23			
90	11.7K	3"-4"	3.75	F0 III					25	Sp. Std.		
90	11.5K	"	"	"					26	"		
18	11.1K	"	"	"					25	"		5.2K
60									28			
"									30			
100	10.7K		4.01	F6 II + A1 V					6	Dby		
110	11.0K		"	"					7	"		
110	11.0K	4"	"	"					10	"		
60									8			
60									9			
580	10.6K		6.40	F6 II - III					11	Dby	SB, too.	
60									12			
640	10.2K		"	"					14	Dby		
60									13			
600	10.3K		"	"					15	"		

43 pg #7

Date 1996 January 5/6 Observers Dby / Smt

Emulsion Batches:

CCD ~~Spectr.~~ Temp. ...
Focus 7
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC38139	COMP							FeAr Clear	60		
40	BIAS(4)			4 48					—		
CG80298-301	HD103095 x4	11 47 13	+38 26 10						.067s		4"
302/03	" x2				05 05	0 04 E	84° Alt	1.0058 airmass	.133s		3.4"
CC38141	COMP							FeAr clear	60		
42	HD103095	11 47 13	+38 26 10	05 10 02	~~00 16~~	00 16 W			901	6.8K	3.4"
43	Comp							"	60		
44	Comp							"	60		
45	HD101107	11 33 01	44 10 48	←	05 32 42	0 47 W			510	[illegible].2K	3"
46	COMP							"	60		
47	HD101107	"	"	5 44 15		0 58 W			500	[illegible].2K	
48	COMP							"	60		
49	HD101107	"	"	5 55 55		1 10 W			500	[illegible]K	
50	Comp							"	60		
51	Bias (4)			~ 6					—		
52	Comp							"	60		

~~Spectr.~~ CCD Temp. -100.5°C Dome Temp./Hum. -18.1°C/68.3% Transparency Conditions clear, full moon 4h W!

Focus 7.12

FANS OFF

Spectr. Temp. Dome Temp./Hum. -18.3°C/68.3% @ seeing test.

420 0 50 1024 4 1 coadd

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ℓ/mm G=4481	300μ	4300 Å	16			
								1			
	4"	V 7.20	G8Vp	EEV CCD TV GUIDER				—	SEEING TEST	Dome SW, no wind, full moon 4h W,	
	3-4"			"				—	"	clear!, cold for 3 days.	
				CASS CCD	as before			19.			
6.8K	3"-4"	V 7.20	G8Vp					20	Std. Vel	well known IAU.	
								21			
								23			
10.2K	3"	B 5.92	F2II-III					25	Dby		
								28			
10.2K		"	"					29	Dby		
								30			
10.2K		"	"					6	"		
								5			
								1			
								8			

45
pg. #8

Date 1996 January 5/6 Observers Dby/Smt

Emulsion Batches:

CCD ~~Spectr.~~ Temp. ...
Focus 7.12
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC381 53	HD96707	11 03 19	67 45 09	06 12 36		2 00W			800	10.2K	
54	Comp							FeAr Clear	60		
55	HD96707	"	"	06 29 53		2 17W			827	10.2K	
56	Comp							"	60		
57	HD96707	"	"	06 47 22		2 36 W			860	10.2K	3"
58	Comp							"	60		
59	COMP							"	60		
60	HD8890	1 22 34	+88 46 26	6 10 19		11 33 W			35	3.0K	3"
61	"			6 11 22		11 34 W			35	13K	"
62	"			6 12 26		11 35 W			36	12K	
63	COMP							"	60		
64	BIAS(4)								—		
65 – 74	FLAT x 10					0	+41°	Tung clear	33		
75/76	INBOARD/OUTBOARD					"	"	FeAr clear	40/70		

~~Spectr.~~ CCD Temp. −101.7°C Dome Temp./Hum. −18.3°C/70.1% Transparency Conditions A bit hazy, some clouds, moon setting in trees!, sun almost rising 46

Focus 7.12 FANS OFF

Spectr. Temp. Dome Temp./Hum. −17.9°C/71.4% 420 0 50 1024 4 1 CCDFMT

Comparison Exp	Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	~~Emulsion~~ c lambda	P.H.	Program	Remarks	Quality
800	10.2K		6.28	FO_pSr	CASS CCD	1800 l/mm G=4481	306μ	4300Å	10	Dby		
60									12			
827	10.2K		"	"					14	"		
60									13			
860	10.2K	3"	"	"					15	"		
60									16			
60									17			
35	13.0K	3"	2.62	F7Ib-IIv					20	Dby	Telescope pseudo-reversed.	
35	13K	"	"	"					21	"	"	
36	12K		"	"					22	"	" dawn.	
60									23			
–									1			
33									2			
40/30									3/4	focus test.		13K → 12K

47 pg#1 Sun/Mon

Date 1996 JAN 7/8 Observers [R.W.]/T.L./Smit

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC 381 77/78	Inboard/Outboard					0 0	+44	FeAr Clean	60/60	Ng 39 (BLUE)	
79	BIAS(4)			17 42						(stuck)	
80	Comp							"	60s		
81	HD 180583	19 11 59	+27 44 59	18 05 31		5 53 W			776	2100	>8"
82	Comp							"	60		
83	COMP							"	"		
84	HD203156	21 15 23	+37 48 55	18 26 01		4 07 W			602	3130	>6"
85	COMP							"	60		
86	BIAS(4)			18 39					—		
87	COMP							"	60		
88	HD187691	19 46 14	+10 09 55	18 47 33		5 55 W			505	820	Stupid
89	COMP							"	60		
90	COMP							"	"		
91	HD222368	23 34 48	+05 05 03	19 04 33		2 20 W			300	6.7K	5"
92	COMP							"	60		

Spectr. Temp. ...
Focus 7.00
Spectr. Temp. ...

ccd Spectr. Temp. −100 °C. Dome Temp./Hum. −12.5°C 60% H Transparency Conditions thin cloud

Focus 7.00

Spectr. Temp. Dome Temp./Hum. c d

FANS OFF

4 20 0 50 1024 4 1 ccd

Companion Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10/10	BG 39 (BLUE) FILTER IN (STUCK)				CH55 CCD	1800 l/mm G=3945	306u	6400Å ±.5Å	3/4	Focus test	not quite 6400Å at this time	
									1/2			
60									5		Grating coord reset in Reboot Telescope East side of piers	1.8K
7/6	2100	>8"	⟨v⟩ 6.19	F6I-IIb					6	Rm Cepheid	V473 Lyr, ran out of time to do it on W side of piers.	3K
60									7			
"									8			
602	3930	>6"	v 5.8-5.9	F2					9	Rm Cepheid	still on E side of piers V1334 Cyg	47K
60									10			
–									1			
60									11			
505	820	stupid.	v 5.11	F8V					12	Std Vel	looks like it was trailed 6 → 7.3 airmass only 10° Alt., on E side still	1.1K
60									13			
'									14			
310	6.7K	5"	v 4.13	F7V					15	Std Vel	on E side still	7.5K
60									16			

49 py #2

Date 1996 Jan. 7/8 Observers [Rm] / Tm / Smt

Emulsion Batches:

Spectr. Temp. ..
Focus 7.0
Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC38193	Comp							FeAr Clear	60s	06:00 [illegible]	
94	HD 214975	22 36 54	+56 17 00	19 21 41		4 10 W			2300	1150	8"
95	Comp							"	60		
96	BIAS(4)			20 03					—		
97	Comp			20 07 ~~40~~				"	60		
98	HD 215159	22 38 15	+53 23 08	20 07 40		4 21 W			335	3170	5"
99	Comp							"	60		
CC38200	Comp							"	60		
01	~~VY Per~~ BRighter StaR 2' NNW of VY Per	02 20 19	+58 28 06	20 22 29		1 0 W			836	850	4"
02	Comp							"	60		
03	~~BIAS(4)~~ VY Per	02 20 19	+58 28 06	20 40 01		1 54 W			3000	170	4-6"
04	Comp							"	60		
05	BIAS(4)			21 32					—		
06	COMP							"	60		
07	HD25361	03 56 42	+58 23	21 42 51		0 48 W			1149	1500	4-6"
08	Comp							"	60		

Spectr. Temp. ....

Focus ......7.00.............

Spectr. Temp. ....

Dome Temp./Hum. -14.1°C / 62.0%

Dome Temp./Hum. -13.2°C / 59.0%H

Transparency Conditions ..thin cloud → clear. ..

420 0 50 1024 4 1 [illegible]

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
OG 560 now in				CASSCCD	1800 l/mm G = 5945	300u	6400Å	17		Telescope still east side	
2200	8"	8.40	G0Ib					18	Rm Cepheid pgm	Z Lac	2K
								19			
								1			
								20			
3270	5"	6.19	K2					21	Std for Z Lac (>300/1 s/n)		55K
								22			
								23			
850	4"	~~10.4~~ ~~-11.66~~	~G ~~F5~~ ~~-F9~~					24	~~Rm cepheid~~	Brighter nearby field star	
								25			
570	4"-6"	10.8 - 11.66	F5 - F9					26	Rm cepheid	autoguided	400 [illegible]
								27			
								1			
								28			
2800	4"-6"	7.3 - 8.07	F6Ib - G2Ib					29	Rm Cepheid.		4.7K
								30			1.5K

51
Pg #3

Sun / moon

Date 1996 JAN. 7/8 Observers [Rv.] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CG80304/307	HD 29587	4 34 30	+41 57 00			0 26 W		4x	67m
308/09	"							2x	133m
CC38209	Comp							FeAr clear	60s
10	HD 29587	4 34 30	+41 57 00	22 21 00		0 44 W			823
11	Comp							"	60
12	BIAS (4)			22 37					
13	Comp							"	60
14	HD 30282	4 41 06	+36 32 00	22 44 21		1 00 W			~~745~~
15	Comp							"	60
16	Comp							"	60
17	HD 44990	6 19 49	+7 08 25	23 08 24		0 20 E			362
18	Comp							"	60
19	Comp							"	60
20	IRIS	4 01 53	+20 01 36 (1996.0 (from Megastar))	23 25 06		2 43 W			1710
21	Comp							"	60
22→31	FLAT x 10					2 50 W	+20°	Tung.	7

CCD Spectr. Temp. −10°3°C ..... Dome Temp./Hum. −13.4°C 59.2%RH Transparency Conditions .... O.K., clear 52

Focus ...... 7.00 ....

Spectr. Temp. .... Dome Temp./Hum. .... Pearson Airport wind N 24 km @ 22 EST

c. Lumbola

Comparison Exp.	Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	96 560 Filter	Relatively OK now			~~[illegible]~~ EEV CCD	1800 l/mm G-5945	306μ ABOVE	6400Å	—	Seeing test	ALT = 86° Pimo East	
		3"-4"?	7.29	dG2	TV GUIDER			exactly	—	" "	Telescope Eastside	
					CASS CCD	↓	306μ	↓	5			
	3000	5"	7.29	dG2					6	Std Vel		4.3K
									7			
									1/2			
									8			
	3200	4"-6"	B= 7.9-8.8	F6-G1					9	Rm Cepheid	AW Per	5 K
									10			
									11			
	3600	5"-7"	B 6.5-8.0	F7Iab-K1Iab					12	Rm Cepheid	T Mon	
									13			
									14			
	2160	5"	8.1	G2					15	Std Vel	Minor planet use	5.1K
									16			
									2		end of Rm pgm tonight	10.3K

[illegible] #4

Date 1996 January 7/8 Observers [Bln] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 38 232/33	INBOARD/OUTBOARD							FeAr clear	40/20
34	Comp							"	60
35	HD 37017	5 30 25	-04 33 36	01 10 34 ~~22 21 00~~		2 56 W			1800
36	comp							"	60s
37	BIAS(4)			1 44					—
38	~~Comp~~ BIAS(4)			1 49					—
39	COMP							"	60
40	HD 37468 AB	5 33 44	-02 39 28	01 54 43		3 15 W			460
41	COMP							"	60
42	COMP							"	"
43	HD 34759	5 14 44	+41 42 17	02 13 16		3 59 W			962
44	Comp							"	60
45/53	FLATS x 9			02 37		5 40 E	83°	Tung Clear	22s
54	BIAS(4)			2 44					
55	Comp							FeAr clear	60

~~Spectr.~~ CCD Temp. -101.2°C Dome Temp./Hum. -14.0°C 59.7%H Transparency Conditions clear 54

Focus 7.08

FANS OFF

Spectr. Temp. Dome Temp./Hum.

420 0 50 1024 4 lccdflat

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCD	P.H.	Program	Remarks	Quality
		Bk 39 FILTER				CASS CCD	1800 ll/mm G=4590	306μ	4464Å	3/4	focus test	in focus now. T seems stable.	
										5			
		7000	6"-8"	6.42	B2Vp	centred on cols 29-30! (on hot!)				6	He Rich	Bkn re-done late because exposure wasn't ever hit the first time. too many cooks I guess.	2K
										7		grainy bkg	
										1		grainy	
										1		not grainy - fine.	
										8			
		22K	>8"	B 3.57	O9.5V					9	Bln	seeing is horrendous. D is on slit, too but very faint ∴ not worth trying to get it alone	7K
										10			
										11			
		22K	6"	V 5.09	B5V					12	Bln pgm	(350/1 5/1)	7-8K
										13			
		Telescope ≈ mid way between E & W side config. IF Relevant								2		(~~350/1 5/1~~)	BK
										1/2			
										14		Now Tel west side of piers	

SS
pg#5

Date 1996. Jan. 7/8 (Sun/mon) Observers [Bh]/Tu./Snt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC38256	HD120315	134336	+49 49	025114		4 03E			83
57	Comp							Fe Ar Chain	60
58	Comp							"	60
59	HD154528	17 0054	+77 4800	030028		6 15E			2997
60	Comp							"	60
61	Comp							"	60
62	HD116842	13 2113	+55 3032	040022		2 30E			25
63	Comp							"	60
64	BIAS(4)			04 07					
65	Comp							"	60
66	HD84441	09 4011	+24 1405	04 1736		1 26W			162
67	Comp							"	60
68/69	INBOARD/OUTBOARD					0	+33°	"	40/70

CCD Spectr. Temp. Focus 7.08 Spectr. Temp.

CCD
Spectr. Temp. −100.0°C . . . . . Dome Temp./Hum. −15.0°C 59.7%/H Transparency Conditions . . Fine . . . .

Focus . . . 7.08 . . . . but wind getting high from North

Spectr. Temp. . . . . Dome Temp./Hum. . . . . 420 0.53 1024 4 1 CCDFLAT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 33,600		V 1.86	B3V	CHSS CCD	1800 l/mm G=4590	306μ	4464Å	15		≈400/1 S/N	10K
								16			
								17			1.3K
13000	6"–10"	V 6.66	A0					18	Bk pgm		
								19			
								20			
12000		B 4.17	A5V					21	Alcor –	It seemed bright to me	5K
								22		~~c was on the way down~~	
								1/2			
								23			
20000		V 2.98	G1 II					24	Std Lel		
								25		wind picked up – snow blowing	
								3/4	focus test	in through slit.	

pg #1 [Mon / Tue]

Date 1996 January 8/9 Observers [Bln.] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38270/71	INBOARD/OUTBOARD					0 20 W	+ 41 ish	Fe Ar clear	40/20		
72	BIAS (4)			17 48					—		
73	COMP							"	60		
74	HD192518	20 10 08	+28 23 30	17 51 08		4 49 W			1105	20.3K	3-4"
75	COMP							"	60		
76	COMP							"	"		
77	HD 210459	22 05 33	+32 41 15	18 16 42		3 07 W			360	..1K	3-4"
78	COMP							"	60		
79	Comp							"	60		
80	HD214975 ? (HD214946 Hopefully in Head of Tn JAN 11)	22 36 42	+44 29	18 29 45		3 33 W			3000	1.9K	3"
81	COMP							"	60		
82	BIAS (4)			19 23					—		
83	COMP							"	60		
84	HD222368	23 34 48	+05 05 03	19 30 18		2 51 W			360	17.3K	3-4"
85	COMP							"	60		

CCD ~~Spectr.~~ Temp. -100.0°C Dome Temp./Hum. -7.2°C/69.1% @ focus test Transparency Conditions partly cloudy, warmer 58 tonight → clear

FANS ON

Focus 7.00

CCD ~~Spectr.~~ Temp. -101.9°C for W Dome Temp./Hum.

420 0 50 1024 4 1 ccdfit

Comparison Filter	Comparison Exp	Exp. Mtr.	Seeing	(β) Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	40/10	BG 39 FILTER				CASS CCD	1800 ll/mm λ= 4590	300μ	4464 Å	3/4	focus test	a bit cool if anything	
	-								± .5 Å at most	1			
	20									5			
	105	20.3K	3"-4"	5.36	A7IVn					6	Bln A-shell*		8.8K
	60									7			
	'									8			
	300	21.1K	3"-4"	4.75	F5III					9	Bln A-shell*	S/N ~ 340:1	12.4K
	60									10			
	60									11			
	300	14.9K	3"	7.26	A5		S/N ~	300:1		~~12~~ 9	Bln SB2	written in wrong cache – must edit ~~header~~ accordingly DONE	7.0K
	60									10			
	-									1			
	60									11			
	300	17.3K	3"-4"	4.13	F7V					~~12~~ 9	std vel	wrong cache AGAIN.	7.8K
	60									13			

pg[59] #2

Date 1996 January 8/9 Observers [Bln]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38286	COMP							Fe Ar clear	60		
87	HD37468AB	05 33 44	-02 39 28	19 44 20		2 56E			250	15,000	4.5"
88	Comp							"	60		
89	HD54241 D	"	"	19 51 21		2 23 E			179	7000	5"8
90	Comp							"	60		
91	HD37468 AB	"	"	20 25 03		2 14 E			312	?,300	7"/8
92	Comp							"	60		
93	BIAS(4)			20 33							
94	Comp							"	60		
95	HD 37017	5 30 25	-04 33 36	20 38 19		1 30 E			1965	0.8K	5"7"
96	COMP							"	60		
297 → 305	FLAT x 9					0 01 W	-4°30'	Tung clear	22		

Spectr. Temp.

Focus .... 7.

Spectr. Temp.

CCD ~~Spectr.~~ Temp. -100 °C   Dome Temp./Hum. -8.0°C / 72.2%   Transparency Conditions partly cloudy again [60]

Focus 7.00   * FANS ON, ie now only NE FAN Letton

Spectr. Temp. ....   Dome Temp./Hum. ....   420 0 50 1024 4 1 ccdfast

Comparison Filter	Exp	Exp. Mtr.	Seeing	(B) Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	60	BG 39 FILTER				CASS CCD	1800 l/mm G=4590	306μ	4464 Å	14			
	250	15,000	4"-5"	3.57	09.5 V					15	Bln		6.9K
	60									16			
	179	7000	5"-8"	6.3	B2 V					17	Bln pgm	Hard To keep AB off (separated) [illegible] Some cloud	
	60									18			
	312	16,300	7"-15"	3.57	09.5 V					19	Bln pgm	seeing terrible	
	60									20			1.2K
										1/2			
	60									21			
	19.5	10.8K	5"-7"	6.42	B2 V p					22	He Rich Bln	cloud @ end - cut short	4.4K
	[illegible]									23		Solid cloud all over.	
	22									24		dome closed.	123K → 11.8K
												snow later.	

61
Pg#1

Wed / Thurs

Date 1996 Jan 10/11 Observers [Bln.] / T.n.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC383 06/07	Inboard / outboard Hartmann					0 0	+44°	FeAr clear	40/70
08	BIAS (4)								
09	Comp							FeAr clear	60s
10	HD 214946	22 36 42	+44 29 00	17 45 56		2 56 W			2967
11	Comp							"	60
12	BIAS (4)			18 40					
13	Comp							"	60s
14	HD 154528	17 00 54	+77 48 00	18 48 49		9 40 W			2710
15	Comp							"	60s
16	Comp							"	60
17	HD 34759	5 14 44	+41 42 17	19 46 00		2 21 E			775
18	Comp							"	60
19	BIAS (4)			20 02					
20	Comp							"	60
21	HD 222368	23 34 48	+5 05 03	20 10 08		3 42 W		"	582
22	Comp							"	60

Spectr. Temp.
Focus
Spectr. Temp.

Exp Mtr	Seeing
5.5 filter	
8000	4.5"
15,100	5-6"
15,800	4-6"
12000	6"

~~Spectr.~~ CCD Temp. −102.1°C   Dome Temp./Hum. −9.0°C 67% H   Transparency Conditions Fine   62

Focus 7.00   90 c gain

Spectr. Temp.   Dome Temp./Hum. −10.9°C 71% H

420 0 50 1024 4 1 CCDFMT   MAX ADU

Comparison Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCD	P.H.	Program	Remarks	Quality
40/30	BG39 Filter				CASS CCD	1800 l/mm G=4590	306μ	4464Å	3/4	Focus test	Set for expected coolant temp.	
					G value untouched from previous night.				1/2			
60s									5			1.2k
2947	8000	4"–5"	7.26	A5					6	Bln SB	P = 3.04 days	3.3k
60									7			1.1K
									1/2			
60s									8			1 K
2770	10,100	5"–6"	6.66	A0					9	SB2 Bln	P = 4.90 days	5.1K
60s									10			1 K
60									11			1.1K
775	15,800	4"–6"	5.09	B5 V					12	Bln pgm		7 K
60									13			
									1/2			
60									14			1.3K
582	12000	6"	4.13	F7 V					15	Std vel		3.7K
60									16			1.3K

63
Py #2 Wed / Thurs

Date 1996 JAN 10/11 Observers [Bln] / Ta

Emulsion Batches:

CCD Spectr. Temp. ...
Focus 7.08
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC38323	Comp							FeAr clear	60s		
24	HD 37017	5 30 25	-04 33 36	20 32 26		1 22E			2340	9,600	5"-8"
25	comp							"	60s		
26	BIAS(4)			21 14							
27	Comp							"	60s		
28	HD 29587	4 34 30	+41 57	21 20 05		0 04E			918	2000	5"-6"
29	comp							"	60s		
CG803 10/13	HD 29587	"	"	21 38				4x	67ms		
CG803 14/15	"	"	"			0 03W		2x	133ms		
CC38330	Comp							FeAr clear	60s		
31	HD 37468 AB	5 33 44	-2 39 28	21 50 07		0 42E			256	15,800	4"-6"
32	Comp							"	60		
33	AD54241 D	"	"	21 57 20		0 05E			2047	8,250	4"
34	Comp							"	60s		
35	HD 37468 AB	"	"	22 35 31		0 03W			222	16000	
36	Comp							"	60s		

~~Spectr.~~ CCD Temp. −100.3°C Dome Temp./Hum. −11.3°C 71%H Transparency Conditions slight haze only

Focus 7.00 [Atm PRESS 102.34 kps and steady]

Spectr. Temp. Dome Temp./Hum. (Only NE FAN on Now) MAX

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
64					CASS CCD	1800 l/mm G=4590	306μ	4464Å	66			1.2K
2340	9,600	5"-8"	6.42	B2V p					25	Bln pgm	- ~~...~~	4K
60									26			
									1/2			
60									27			
918	2000	5"-6"	7.29	dG2					28	Std vel	for seeing test too	900
60									29			
67ms			7.29	dG2		ABOVE	306μ slit			Seeing test Dome west		
137ms					ALT=	88°			Wind	WNW	11 Km/hr airport	
60									5ci			
256	15,800	4"-6"	3.57	O9.5V					6	Bln pgm		6K
60									7			
3047	8,250	4"	6.3	B2V					8		good separation guided with AB off slit	
64									10			
272	16000		3.57	O9.5V					11			
60									13			

65 pg #3 Wed / Thurs

Date 1996. Jan. 10/11..... Observers [Bh] / Tn...............

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38337	BIAS(4)			22 42					
38	ADS 4241 D	5 33 44	-2 39 28	22 46 04		0 40 W			1703
39	Comp							FeAr clear	60s
40	Comp							"	60
41	HD120315	13 43 36	+49 48 45	23 27 23		7 15 E			
42	Comp							"	60s
43/51	FLAT x 9			23 34		1 40E	+22°	TUNG Ap clear	22s
52	BIAS(4)								
53/54	Inboard / outboard Hartmann			00 00		0	+31°	FeAr clear	40/70

~~Spectr.~~ CCD Temp. -10.0.3°C Dome Temp./Hum. -12.4°c 74.7% H Transparency Conditions Fine 66

Focus 7.00

Spectr. Temp. Dome Temp./Hum. -12.3°c 76.7% A

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	1800 l/mm	306μ	4464Å	1/2			
7,600	4"	6.3	B2V					12 ci	Bin pym	OFFset guide experiment Repeat, using SBIG. with ADS 4241 E as guide star	3.3K
								13			
								13			1.3K
21,300		1.86	B3V					14	OFFSet guide exp. R = 20,100		9K
								16	Exp = .2 sec good for 6th mag ADS4241E		

1 2 3 4 MAX move
Corr speeds - 1 1 1 1 3.0
Track Contr Min move 200ms
Dead Time 50 ms
Averageing 2

Note. After Flats, Spectrocontrol failed again and on Reset, Indication was that Hartman mask was going home, forward. On checking, I found mask in "Comp", South posn.

It may have ?? been there all night. Exposure strength compared with previous night should tell the tale

I cannot say for sure if "M" in monitor said "Home" during the night.

No We must be OK. Same max of comparison noted both nights. TM

67
pg #1 [Fri/Sat]

Date 1996 January 12/13 Observers [Bln]/Smt

Emulsion Batches: -

Spectr. Temp. [illegible]

Focus [illegible]

Spectr. Temp. [illegible]

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38355/56	INBOARD/OUTBOARD					0h	+46°	FeAr clear	20/40	BG 39 FILTER	
57	BIAS (4)			17 54					—		
58	COMP							FeAr clear	20		
59	HD226868	19 54 36	+34 56	18 04 07		5 43 W			1600	600	2-3"
60	COMP							"	20		
61	COMP							"	"		
62	HD222368	23 34 48	+05 05 03	18 39 51		2 13 W			170	6000	3"
63	COMP							"	20		
64	BIAS (4)			18 46					—		
65	COMP							"	20		
66	HD218915	23 06 42	+52 31	18 59 35		3 14 W			940	2300	3"
67	COMP							"	20		
68	COMP							"	"		
69	HD108	00 00 54	+63 07	19 24 49		2 49 W			1200	2780	3-4"
70	COMP							"	20		

~~CCD~~ Spectr. Temp. -102.1°C Dome Temp./Hum. -6.6°C/72.3% Transparency Conditions Clear, some cloud to S. [illegible]

Focus ~~[illegible]~~ 7.10 @ focus test FANS ON

Spectr. Temp. .... Dome Temp./Hum. ....

455 0 50 1024 4 1 ccdfat

Companion Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
20/40	BG 39 FILTER				CASS CCD	~~[illegible]~~ 600 l/mm (c)	25µ	4298 Å	3/4	focus test	in focus	
—						G = 2683		± 1 Å	1			
20						homed & put back when reset, exactly			5		spec. controller reset	
140	600	2"-3"	B 9.74	O9.7Iab				4298 Å ± 1 Å	6	Bln O*/SB	Cyg X-1, sky still sort of bright overhead, whopping sky line!	800 above bkg
20									7			
									8			
170	6000	3"	V 4.13	F7V					9	std vel		14.5K
20									10			
—									1			
20									11			
940	3300	3"	~~B 4.58~~	~~O6.f?pe~~					12	Bln O-*		8.7K
20			B 7.20	O9.5Iab					13			
1									14			
1250	2780	3"-4"	B 7.58	O6:f?pe					15	Bln O-*	s/n ~ 270:1	
20									16			

64
pg #2

Date 1996 January 12/13 Observers [Bln] / Smt

Emulsion Batches:

Spectr. Temp. -10
Focus 7.
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38371	BIAS (4)			19 49						[illegible] FILTER	
72	COMP							FeAr clear	20		
73	HD5005 A?	00 47 00	+56 05	19 51 55		2 44 W			2110	2200	2"
74	COMP							"	20		
75	HD5005 B?	00 47 00	+56 05	20 30 01		3 09 W			1280	1030	3"
76	COMP							"	20		
77	BIAS (4)			20 54					—		
78	COMP							"	20		
79	HD3712	00 34 50	+55 59 20	20 59 51		3 31 W			60	12.8K*	2"
80	COMP							"	20		
81	COMP							"	"		
82	HD15137	02 21 12	+52 06	21 09 13		2 22 W			1800	3.5K	2"
83	COMP							"	20		
84	BIAS (4)			21 48					—		
85	COMP							"	20		

CCD ~~Spectr.~~ Temp. −101.3°C Dome Temp./Hum. −8.3°C / 73.8% Transparency Conditions clear, hazy 10

Focus 7.10 ONLY N FAN ON

Spectr. Temp. .... Dome Temp./Hum. .... 455 0 50 1024 4 1 ccdfmt

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	BG 39 FILTER				CASS CCD	600 ℓ/mm C G=2683	250μ	4298 Å	1			
20									17			
2110	2200	2"	B 7.85	06.5V		S/N ~ 260:1			18	Bln O-*	brightest of 3 close. Northern-most of 3, too.	4.5K
20									19			
1280	1030	3"	B? 8-9	O					20	Bln O-*	med bright of 3, closest (SW) to brightest.	
20									21			
—									1			
20									22			
60	12.8K*	2"	V 2.23	K0 IIIa					23	std vel	*trailed across slit.	
20									24			
"									25			
1800	3.5K	2"	B 7.72	09.5II-III(n)					26	Bln O-*	SBIG ST-4 autoguided. S/N ~ 305:1	10.1K
20									27			
—									1			
20									28			

71
pg#3

Date 1996 January 12/13 Observers [Bin] / Smt

Emulsion Batches: ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38386	HD14633	02 16 42	+41 02	21 50 23		2 55 W			1020
87	COMP							FeAr clear	20
88	COMP							"	"
89	HD17505	02 43 24	+60 01	22 13 30		3 02 W			1750
90	COMP							"	20
91	BIAS (4)			22 49					—
92	COMP							"	20
93	HD34656	05 14 00	+37 20	22 50 59		0 51 W			615
94	COMP							"	20
95	COMP							"	"
96	HD37043	05 30 32	-05 58 32	23 10 46		0 47 W			40
97	COMP							"	20
98	COMP							"	20
99	HD37022 C	05 30 22	-05 27 20	23 16 49		0 57 W		-	300
cc38400	COMP							"	20

CCD Temp. ...
Focus 7.1
Spectr. Temp. ...

BG 39 Exp Mtr. FILTER	Seeing
3.5K	2"
3.7K	2-3" →4"
3.8K	2-4"
15K	3"
45K	3"

~~Spectr.~~ CCD Temp. -101.3°C Dome Temp./Hum. -8.4°C / 73.8% Transparency Conditions clear with some haze .. 72

Focus 7.10 N FAN ON

Spectr. Temp. Dome Temp./Hum.

455 0 50 1024 4 1 ccdfmt

Comparison Filter Exp	BG 39 Exp. Mtr. FILTER	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1020	3.5K	2"	7.26	ON8V	CASS CCD	600 l/mm C G = 2683	250μ	4298 Å	29	Bln - O*	S/N ~ 325:1	10K
20									30			
"									31			
1150	3.7K	2"-3" →4"	7.46	O6.5V((f))					32	Bln - O*	faint companion due E, on slit ~2" separation, some scattered light from S pier in slit view	6.8K
20									33			
–									1			
20									5			
615	3880	2"-4"	6.81	O7II(f)					6	Bln - O*		10.0K
20									7			
"									8			
40	[illegible].5K	3"	2.53	O9III					9	Bln - O*	trailed	9.0K
20									10			
20									11			
300	4.5K	3"	5.15	O6ep(?)					12	Bln - O*	brightest of trapezium (θ^1 Ori) bright emission nebula background.	10.9K
20									13			

73
pg # 4

Date 1996 January 12/13 Observers [Bln]/Smt

Emulsion Batches:

CCD ~~Spectr.~~ Temp. ...
Focus ... 7.1
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38401	COMP							FeAr clear	20		
02	HD37023 D	05 30 23	-05 27 14	23 27 53		1 19 W			950	875	3"
03	COMP							FeAr clear	20		
04	HD37023 D			23 47 15		1 52 W			1800	1530	3"
05	COMP							"	20		
06	BIAS(4)			0 20					—		
07	COMP							"	20		
08	HD37742	05 35 43	-01 59 43	0 24 06		1 55 W			30	35K	5"
09	"			0 25 46		1 58 W			60	75K	
10	COMP							"	20		
11	COMP							"	"		
12	HD47839	06 35 28	+09 59 18	00 36 10		1 10 W			240	50K	4-5"
13	COMP							"	20		
14	COMP							"	20		
15	HD47432	06 33 27	+01 42 03	00 45 18		1 21 W			205	99	5-6"
16	COMP							"	20		

~~Spectr.~~ CCD Temp. -100.3 °C Dome Temp./Hum. -8.3°C/76.5% Transparency Conditions clear, with some haze. 74

Focus 7.10 N FAN ON → quickly mostly cloudy

Spectr. Temp. Dome Temp./Hum. 455 0 50 1024 4 (ccdfat

Comparison Exp	Exp. Mtr.	Seeing	B Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
20					CASS CCD	600ℓ/mm (C) G=2683	250μ	4298Å	14			
950	875	3"	6.78*	O9.5V					15	Bln-O*	* seems fainter – much so cut short to check star pos'n (10)	1.8K
20									16			
1800	1530	3"	6.78*	O9.5V		add both to get 300:1 S/N			17	Bln-O*	*star is fainter than 7th mag → 8th at best!	
20									18			
–									1			
20									22			
30	3.5K	5"	B 1.54	O9.5Ib					23	Bln-O*	trailed.	3.9K
60	7.5K								23	"	trailed helped by cloud	9.9K
20									24			
"									25		clouds coming	
240	5.0K	4"-5"	4.40	O7V((f))					26	Bln-O*	clear here for now	11.7K
20									27			
20									28			
235	99	5"-6"	6.36	O9.7Ib					29	Bln-O*	mostly cloudy now ∴ mostly sky lines.	3K bkg
20									30			

75
pg #5

Date 1996 January 12/13 Observers [Bln]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38417 →25	FLAT x 9					1 30 W	+1°	Tung clear	6
26	BIAS (4)			0 58					—
27/28	INBOARD/OUTBOARD					0	+41°	Fe Ar clear	20/40

CCD Spectr. Temp.
Focus 7
Spectr. Temp.

Exp Mtr	Seeing

CCD ~~Spectr.~~ Temp. -100.3°C ..... Dome Temp./Hum. -9.4°C/78.6% Transparency Conditions ... cloudy .... 76.

Focus .... 7.10 ....

Spectr. Temp. .... Dome Temp./Hum. ....

455 0 50 1024 4 1 ccdflat

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	6					CASS CCD	600 l/mm C G = 2683	250μ	4298 Å	31		dome closed after flats	13.6k →
	—									1			
	20/40									3/4	focus test	warm now.	

77
pg #1 Sun/mon

Date 1996 JAN 14/15 .... Observers [Bh] / Tn/Snt ....

Emulsion Batches:
....
....
....

Spectr. Temp. ... 50
Focus 7.10
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC 384 29/30	Inboard/outboard Hartmann					0	43°	Fe-Ar Clear	20/40	Bd 39 FILTER	
31	BIAS(4)								—		
32	comp							"	20		
33	HD 37366	05 33 00	+30 50	23 16 47		1 36 W			2435	1280 @ 1500 sec mark by spec...	8"
34	COMP							"	20		
35	BIAS(4)										
36	COMP							"	20s		
37	HD 42088	06 03 42	+20 31	00 05 14		1 57 W			2560	1350	7"
38	COMP							"	20s		
39	BIAS(4)			0054							
40	Comp							"	20s		
41	HD 46223	6 27 00	+04 53 00	00 57 14		2 23 W			2358	1000	6-8"
42	Comp							"	20s		
43	comp							"	20s		
44	HD 89449	10 14 18	+19 58 42	01 49 19		0 59 E			760	1300	8-12"
45	Comp							"	20s		

CCD Spectr. Temp. −101.5°C Dome Temp./Hum. −6.5°C / 59.8% Transparency Conditions just cleared B

Focus 7.10 N FAN ON STRONG NNW wind 20 kms/hr

Spectr. Temp. Dome Temp./Hum. −11.0°C / 60.0% H 4550 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	max ADC
BG 39 FILTER				CASS CCD	600 l/mm (C) G=2683	250μ	4298Å	3/4	focus test		
								1/2			
								5			
1280 @ 1500 sec mark, then spec control failed.	8"	7.58	O9.5 V					6	Bln - O*	seeing is settling down, 5°C drop so far (@ 23:30) since opening up.	2.6K
								7			
								1/2			
								8			
2350	7"	7.61	O6.5 V					9	Bln - O*		2.6K
								10			580
								1/2			
								11			610
2000	6-8"	7.47	O4 V	((f))				12	Bln - O*	(≈ 200/1, S/N) cloud @ end	2K
								13		Hartmann mask [illegible]	600
								14			580
2300	8-12"	4.79	F6 IV					15.	Std Vel	cloudy partly	
								16			

pg 79 #2

Date 1996 January 14/15 Observers [Bln]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC30446 →54	FLAT x 9					0 52 E	+19°	Tung clear	6
55	BIAS (4)			2 12					—
56/57	INBOARD/OUTBOARD					"	"	Fe-Ar clear	20/40

Spectr. Temp.

Focus 7

Spectr. Temp.

Exp Mtr	Seeing
Bs 39 filter	

Spectr. Temp. .... Dome Temp./Hum. ..-11.0°/.59% Transparency Conditions ..clouded in.............. 80

Focus ....7.10..........

Spectr. Temp. .... Dome Temp./Hum. ....

455 0 1024 4 1 cedfit.

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	6	BG 39 FILTER				CASS CCD	600 l/mm G = 2683	250µ	4298Å	17			13.8K →12.8K
	–									1			
	20/40									3/4	focus test.	T dropped 6° from focus test (additional 3° before focus test)	

Pg 81 #1 Mon/Tues

Date 1996 January 15/16 Observers [KK]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE10633/34	INBOARD/OUTBOARD							ThAr	10/6
35	BIAS(4)								
36	COMP							ThAr	10
37	HD215182	22 38 19	+29 41 53	18 07 23					400
38	COMP							ThAr	10
39	BIAS(4)								—
40	COMP							"	10
41	HD34029	05 09 18	+45 53 41	20 26 58		1 25 E			90
42	~~COMP~~ "			20 29 24		1 15 E			601
43	COMP							"	10
44	HD34029			20 41 16		1 03 E			620
45	COMP							"	10
46	COMP							"	"
47	HD215182	22 38 19	+29 41 53	21 01 31		6 16 W			2154
48	COMP							"	10
49	BIAS(4)			21 40					

CCD Temp.

Focus

Spectr. Temp.

Exp Mtr	Seeing
Bin 18 FILTER	
3 20 V Anti Rebalanced	
6.5K	
53K	
53K	
6 8 K	4"

CCD ~~Spectr.~~ Temp. -100 °C

Focus .232

Spectr. Temp.

Dome Temp./Hum. -11.6°C/48.3% @ focus test

Dome Temp./Hum. -13.0°C 54% H

Transparency Conditions Clear → clouding in 82 → partial clearing/hazy.

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst. ECHELLE	Grating/Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10/6	BG 18 FILTER				17.85	.4455 ° 1200 ll/mm	69μ W 400μ H	3960 Å	1/2	focus test	0 0 128 1024 8 1 ccd ... right in focus.	
	1320V And Rebalanced								1			
10									3			
400			B 3.8	G2II-III + F0IV					4	KK H&K	was clear, clouding in fast	VERY WEAK.
10									3		closed up.	
–									1		opened up.	
10									3			
90	6.5K		V 0.08	G5IIIe + G0III					5	KK H&K	thin cloud or thick haze. test exposure	max. 750.
601	50K		"	"					5	"		3.7K
10									3			
620	53K		"	"					5	"		5.0K
10									3			
									3		telescope on E side	
2?54	6,810	4"	B 3.8	G2II-III + F0IV					4	KK H&K		
10									3			
									1/2			

83. py#2 Mon/Tues

Date 1996 JAN 15/16 Observers [KK]/Tn/Smt

Emulsion Batches:

Spectr. Temp.
Focus .23
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp	Exp Mtr	Seeing
ce10650	Comp							ThAr	10		
51	HD 11636	14907	+20 1909	21 4505		3 34 W			1290	2130	34
52	comp							"	10		
53	BIAS (4)			22 11					—		
54	COMP							"	10		
55	HD 40183	05 52 12	+44 56 15	22 21 16		6 01 W			900	280	
56	COMP							"	10		
57-65	FLAT x 9					3h 0m W	~~3h 0 W~~ ↑ +16°	Tung	200		
66	FLAT							Tung	100		
67	FLAT							"	"		
68	FLAT							Tung CuSO4	"		
69-71	biases (singles)										
72-73	flats with green LED in box near camera mirror							KK	1, 2 sec		
~~74~~	flat with green LED etc		Not written I guess								

funny! I have hardcopy of the images!!

Spectr. Temp. .... Dome Temp./Hum. 13.1°C/55.4% @ 1st bias(4) Transparency Conditions ..increasing cloud.....

Focus ...... .232 ....

Spectr. Temp. .... Dome Temp./Hum. ....

c λ 0 0 256 1024 4 1 ccdfmt

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. echelle	✗ Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0					ccd 17.85	1200 l/mm .4455	60u 400u H	3960Å	3			max 47K
1200	2730	3-4"	2.78	A5V			400uH=.225		5	kk H&K	in cloud → very thick @ end	1500 ADU sum at ½ blaze
10									3			
–									1			
10									3			
400	280		B 1.93	A2V					2	kk H&K		
10									3			
200							60u 600u H	for Flats=.205	6		closed up again.	8K or so →
1000							60 x 400					
"							60 x 500					
"							60 x 500					
1, 2×												
											fullframe format	

pg 185

SAT/Sun

Date Jan 20/21 1996 Observers AnD/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce106-76	Inboard/out board							ThAr	1/1
77	BIAS(4)			18:02					
77	comp							ThAr	1
78	HD24357	3h 47 27	17 01 46	18:10:03		1 32 E			1800
79	comp							ThAr	1
80	HD24357	"	"	18:42:01		1 17 E			700
81	comp							ThAr	1
82	BIAS(4)								
83	comp							ThAr	1
84	HD25102	3h 54 12	10 02 45	19:01:30		1 02 E			900
85	comp							ThAr	1
86	comp							ThAr	1
87	HD26345	4h 04 54	18 00	19:27:27		0 51 E			600
88	comp							ThAr	1s
89	HD26345	"	"	19:40:46		0 18 E		1806	1800
90	comp							ThAr	1s

Spectr. Temp. -100.5° Dome Temp./Hum. -6.8° / 50.6 Transparency Conditions high level cirrus 86

Focus 0.218

Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr. 1320V	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter				echelle 18.13	18.13 300/5685	60µ W 400µH	6520Å	1/2	Hnd.	CCDFNIT for Focus 0 0 128 1024 8 1	
								1/2ci		CCDFNIT 0 0 256 1024 4 1	
								3ci			
8 ~~58~~ 58	3"-4"	5.97	F4V					4ci		VB6 S/N 7170 → broadened - rapid rotator vsini=49	
								3ci			
4.89	2"-3"	"	"					5ci		terminated [VB6 - rapid rotator]	
								5			
								1/2			
								3ci			
335	2"-3"	6.37	F5V					2		VB8 also broad. - rapid rotator 59 km s⁻¹	
								3			
		~~6.62~~	~~F6V~~					3		~~VB36~~	
		6.62	F6V					6		VB36	
								3			
615		"	"					5ci		VB36 S/N 7150	
								3			

8~~7~~8*2

SAT/SUN

Date Jan 20/21/96 Observers Hal/Tn

Emulsion Batches:

Spectr. Temp. ...
Focus ....0.
CCD Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
ce10691	Bias(4)			20:13							
92	HD 26345	4^h 0454	18 100	20:41		00 05 W			1816s	556	3"
93	Comp							ThAr	1s		
94	HD 26345	"	"	20 45 22		00 46 W			1800	342	3"
95	Comp							ThAr	1s		
96	HD 26345	"	"	21 16 22		01 06 W			1118	121	3"
97	Comp					|		ThAr	1s		
98	BIAS(4)			21 36							
99–T08	FLATS x 10					3 06W	+10°	Thing	10.7s		

Spectr. Temp. -100.5 Dome Temp./Hum. -7.7/53.9%

Transparency Conditions Some thin cloud, cloud From South 88

Focus 0:218

CCD ~~Spectr.~~ Temp. -100.3°C Dome Temp./Hum. -7.2°C 60% H

Comparison Filter / Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	B20V no filter				Echelle tilt 18.13	X 5685 300l/mm	60u W 400u H	6520R	1/2	Aml.		
1800	556	3"	6.62	F6V					2c.		(>130/1 S/N)	
1/5									3			
1800	342	3"	"	"					4		(>110/1 S/N)	
1/5									3			
1118	121	3"	"	"					5c:		S/N ~65 getting cloudy	
1/5									3			
									1/2			
[illegible]									1	14.2 max	(Headers say 175, should be 1.7)	
											(we used 100 t scale)	

pg! 89 sun/mon

Date Jan 21/22 1991 Observers Hml / Th

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC10709.	Bias (4)			22:00:39					
710	comp							ThAr	1s
711	HD26345	4h 04 54	18° 10 00	22:45:28		2h 50 45 W			1800
712	comp							ThAr	1s
713	HD 26345	"	"	23:16:36		3h 22 00 W			1800
714	Comp							ThAr	1s
715	Bias (4)			23:48:45					
716	HD26345	"	"	~~23:48:~~ 23:49:30		3h 55 W			1800s
717	comp							ThAr	1s
718	HD26345	"	"	00:21:20		4h 26 59 W			1800
719	Comp							ThAr	1s
720	Bias (4)			00 53					
721	HD26345	"	"	00:53:47		0 49 49 W			1200s
722	comp							ThAr	1s
723	comp			0				ThAr	1s
724	HD102870	11h 45 29	02° 19 42	01:21:13		2 23 E			1200s

Spectr. Temp. ...
Focus ... 0.2
Spectr. Temp. ...

Exp. Mtr	Seeing
written [Faxed to Reinbar]	
609	1.3"
555	
4391	3"
312	
182	3"-4"
1	
2350	4"

Spectr. Temp. -100.5 Dome Temp./Hum. -3.8/66.8% Transparency Conditions cirrus, haze. 90

Focus 0.:21.8

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 CCD FMT

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		1320V				Echelle							
		no filter (Found to be inbalance 400)				Hilt 18,13	λ 5685 300l/mm	60uW 400μ θ	6520Å ε.225	1/2	Bnd.		MAX
Ar	1s									3			
	1800	609	<3"	6.62	F6V					2		V836. S/N ~140/1	
Ar	1s									3			
	1800	555		"	"					4		S/N > 140/1	
Ar	1s									3		−101.4° CCD Dewar T	
										1/2			
	1800s	#399	3"	"	"					5		S/N ≥ 140/1	
Ar	1s									3			
	1800	312		"	"					6		S/N ~140/1	
Ar	1s									3			
				"	"					1/2			
	1200s	182	3"-4"							2		S/N ~100/1	
Ar	1s									3		3"	
Ar	1s	78								3			
	1200	3760	4"	3.61	F9V					4		S/N >400/1	10K

apg #2 Sun/mon

Date 1996 JAN 21/22 Observers Hml/Tn

Emulsion Batches:

Spectr. Temp. ...

Focus ... 0:2

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce10725	comp							ThAr	1s	no filter i: 1320V	
726	HD102870	11h 45 29	02° 19 42	1 46 28		1 58 E			1200s	3535	3"4"
727	comp							ThAr	1s		
728	Bias(4)			2:12:10							
729	comp							ThAr	1s		
730	HD126660	14h 21 48	52° 18 47	2:15:38		4 09 E			860	3740	3"
731	comp							ThAr	1s		
732	HD126660	"	"	2 31 05		3 51 E			1000s	3550	2"3"
733	comp							ThAr	1s		
734	HD126660	"	"	2:51:06		3 18 E			1800s	4665	2"3"
735	comp							ThAr	1s		
736	Bias(4)			3:24:00							
737-746	FLATS x 10					2 37W	+8°	Tung.	7s	100 full scale	
747/48	Inboard/out			3 48		"	"	ThAr	1/1		

Spectr. Temp. .... Dome Temp./Hum. −4.8°C 72.3% H Transparency Conditions slightly hazy 92

Focus ..... 0:218 .... increasing cloud

Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. echelle	Grating/ λ Tilt	Slit	Emulsion c λ	P.H.	Program	Remarks	Quality max
no filter But 1320V				CCD 18:13	300/3685	60u W 400 H	6520Å	3	Hnl		.
3535	3"-4"	3.61	F9V					5		S/N > 400	10K
								3			
								1/2			
								3			
3,740	3"	4.05	F7V					6		S/N > 350/1	6.7K
								3			
3550	2"-3"	"	"					2		S/N ≈ 340/1	
								3			
2665	2"-3"	"	"					4		S/N > 280/1	
								3			
								1/2			
using 100 f scale						60u 600 H	for Flats	1	↑	(Vi Ta flats)	14.5K
						400H		7/8		0 0 128 1024 8 1	

93/9 # 1

Date 1996. January 24/25 Observers Dby/Smt

Emulsion Batches:

CCD Spectr. Temp. :[illegible]
Focus...6.95...
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
cc 38458/59	INBOARD/OUTBOARD	HARTMANN				0 0 0	+38°	FeAr clear	40/70	HV set back to 1000V	
60	BIAS(4)			19 58					—	?? 39 FILTER	
61	COMP							"	60		
62	HD20902	03 17 11	+49 30 19	20 06 00		~30m W			60	0 – not counting	5"+
63	COMP							"	60		
64	COMP							"	"		
65	HD29737	04 35 57	−24 40 40	20 28 18		0 17 W			1800	not working at all	5"
66	COMP							"	60		
67	BIAS(4)			21 02					—		
68	COMP							"	60		
69	HD29737	04 35 57	−24 40 40	21 05 32		0 54 W			1800	not working	5"
70	Comp						accident →	FeAr "/16 Ap	60		
71	Comp							"	60		
72	HD 36673	05 29 19	−17 53 38	21 48 58		0 15 W			60		
73	"	"	"	21 51 08		0 18 W			120		
74	"	"	"	21 54 01		0 23 W			240		

CCD Spectr. Temp. -100°C

Dome Temp./Hum. -1.5°C / 55.2% @focus test

Transparency Conditions clouding in → partly cloudy 4/4 very windy

Focus 6.95

Spectr. Temp.

Dome Temp./Hum.

N FAN ON

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
HV set back to 1000V				CASS CCD	1800 l/mm G=4476	30μ	4300Å ±1Å	3/4	focus test	415 0 50 1024 4 1 ccdflat in focus	
BG 39 FILTER								1		425 0 50 1024 4 1 ccdflat.	
								5			
0 not counting	5"+	B 2.27	F5Ib					6	Sp. Std.	α Per, trailed.	
								7			
not working at all								8			
	5"	B 6.50	G6III					9	Sp Std	SBIG ST-4 AUTOGUIDED, sky lines	s/wk
								10			
								1		spec. controller reset	
								11		some clouds (moving (maybe))	
not working	5"	B 6.50	G6III					12	Sp Std.	Spect. Cntlr. failed	
								13		delayed comp. (Heavy clouds in image)	
								14			
"		B 2.79	F0Ib					15	Sp. Std.		
"		"	"					"	"		
"		"	"					"	"		

96 #2

Date 1996 January 24/25 Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC38475	Comp							FeAr Clear	60s
76	BIAS(4)			22 01					—
77	COMP							"	60
78	HD60335	07 28 54	+43 15 03	22 11 09		0 57 E			1800
79	COMP							"	60
80	HD60335	07 28 54	+43 15 03	22 45 06		0 23 E			1800
81	COMP							"	60
82	HD60335	"	"	23 18 10		0 10 W			1810
83	COMP							"	60
84	BIAS(4)			00 04					-
CG80316-19	HD64958 x4	07 51 15	+44 14 40						.067
20/21	" x2				00 04	0 03 W	89° Alt		.133
CC38485	COMP							FeAr Clear	60
86	HD62140	07 37 24	+63 04 18	00 15 53		0 57 W			1800
87	COMP							"	60
88	HD62140	"	"	00 52 35		1 37 W			1870

CCD
~~Spectr.~~ Temp. -101.3°C Dome Temp./Hum. -6.5°C/52.3% @ top of page Transparency Conditions partly or mostly cloudy 96
Focus 6.95 N FAN ON → clear
Spectr. Temp. Dome Temp./Hum. -7.6°C/54.4% @ mid page 425 0 50 1024 4 1 ccdfmt

Exp (comparison)	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60s	not working				CASS CCD	1800 ℓ/mm G=4476	300μ	4300Å ±1Å	16			
—									1			
60									17			
1800	—	5"	B 6.33	F0					18	Dbg F star	cloud on and off.	3K
60									19			
1800	—	4-5"	"	"					20	"	thin cloud.	
60									21			
1810	—	6"	"	"					22	"	clear but windier, wind died.	
60									23			
.									1			
1.007	—	5"	V 6.39	K0III	EEV CCD TV GUIDER		above 300μ		—	seeing test	Dome W, med W wind	
.133	—								—	"	clear now, -7.9°C/52.2% should snow soon, snowing at Ta's house	
60					CASS CCD again.				25			
1800	—	4"	B 6.75	F0p Sr Eu					6	Dbg F star	no clouds at all — wind dying down. Seeing improving	
60									7			
1870	—		"	"					6	"		

9 pg 3.

Date 1996 Jan 24/25 Observers Dky/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC38489	Comp							FeAr Clear	60		
90	HD62140	07 37 24	63 04 18	01 27 33		02 09 W			1810		
91	Comp							"	60		
92	Bias (4)								–		
93	Comp							"	60		
94	HD77601	08 58 30	48 55 40	02 16 10		1 39 W			1800	–	5-6"
95	Comp							"	60		
96	HD77601	"	"	02 49 22		2 12 W			1800	–	5"
97	COMP							"	60		
98	HD77601	"	"	03 23 55		2 47 W			1800	–	4-5"
99	COMP							"	60		
CC38500	BIAS (4)			03 57					–		
01	COMP							"	60		
02	HD8890	1 22 34	+88 46 26	04 17 20		9 58 W			120		8"
03	"			04 20 15		10 00 W			120		
04	"			04 23 13		10 04 W			180		

Spectr. Temp.
Focus
Spectr. Temp.

~~Spectr.~~ CCD Temp. -101·4 Dome Temp./Hum. -8·8°C / 57·5% Transparency Conditions ~~cloudy~~ clear

Focus 6.95

Spectr. Temp. Dome Temp./Hum. -11.0°C / 62.3% @ mid-page.

N FAN STILL ON

425 0 50 1024 4 1 CCDFMT

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ C lambda	P.H.	Program	Remarks	Quality
60					CASS CCD	1800l/mm G=4476	306μ	4300 Å ± 1Å	7			
1800			B 6.75	FOpSr?					6	Dby F-Star		
60									7			
–									1			
60									8			
1800	—	5"-6"	B 6.40	F6II-III					9	Dby F-Star		4.5K
60									10			
1800	—	5"	"	"					11	"1		3.8K
60									8		spec. controller reset.	
1800	—	4"-5"	"	"					9	"		3.1K
60									10			
~									1			
60									13			
1200		8"	B 2.62	F7Ib-IIv					14	Dby F-star	tel on E side, sat d.	7K
1200			"	"					15	"		7K
[illegible]			"	"					14	"		10.8K

99 pg #4

Date 1996 January 24/25 Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38505	COMP							FeAr clear	60		
06	COMP							"	"		
07	HD45947	06 25 17	+73 46 22	04 35 23		6 28 W	40° Alt. @ end.		1835	—	5-6"
08	COMP							"	60		
09	HD45947	"	"	05 09 12		7 01 W	38° Alt @ end		1800	—	5"
10	COMP			0				"	60		
11	HD45947	"	"	05 43 00		7 34 W			1800	—	5"
12	COMP							"	60		
13	BIAS (4)			06 15					—		
14	COMP							"	60		
15	HD101107	11 33 01	+44 10 48	06 49 59		3 32 W			1200	—	5"
16	COMP							"	60		
17	BIAS (4)								—		
18–27	FLAT x 10					+44°	3 34 W	Tung clear	33		
28/29	INBOARD/OUTBOARD					"	"	FeAr clear	40/70		

Spectr. Temp.

Focus 1.95

Spectr. Temp.

~~Spectr.~~ CCD Temp. -99.7°C Dome Temp./Hum. -12.1°C / 62.9% Transparency Conditions clear 100

Focus 6.95

Spectr. Temp. Dome Temp./Hum. -13.6°C / 63.9% @ focus test

N FAN ON

425 0 50 1024 4 1 ccdfmt

Comparison Filter / Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60	not working				CASS CCD	1800 l/mm G=4476	306μm	4300 Å	16			
									17			
1335	—	5"-6"	B 6.62	F2					18	Dby F star	tel on E side still	2.6K
60									19			
1800	—	5"	"	"					20	"		2.5K
60									21			
1800	—	5"	"	"					18	"		
60									19			
—									1		CCD TEMP = -95°C TOP UP LN2 AFTER BIAS(4)	
60									23			
1200	—	5"	B 5.92	F2 II - III					24	Dby F star	Hartmann mask in inboard pos'n for 500s! DAWN	
60									25			
/									1			
33									2			>11 K
[illegible]									3/4	focus test	T dropped 13° from start. probably horrible now.	

pg #1 Sun/Mon

Date 1996 January 28/29 Observers [Bln]/Tn/Smt

Emulsion Batches:

CCD Spectr. Temp.
Focus 7.04
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38530/31	INBOARD/OUTBOARD							FeAr clear	40/70	[illegible] FILTER	
32	BIAS(4)			19 43							
33	Comp							FeAr Clear	60s		
34	HD214946	22 36 42	+44 29 00	19 47 10		5 54 W			2083	not functioning	3"
35	Comp							"	60s		
36	BIAS(4)			20 25					—		
37	Comp							FeAr CLEAR	6[illegible]		
38	HD37017	5 30 25	-4 33 36	20 37 55		0 13 E			1800	[illegible]	4"
39	Comp							"	6[illegible]	[illegible]	
40	COMP							"	60		
41	ADS4241D HD37468 D	5 33 42	-2 39 12	21 18 49		0 24 W			1800		5"
42	COMP							"	60		
43	BIAS(4)			21 51					—		
44	ADS4241AB HD37468AB	5 33 44	-2 39 28	21 56 48		0 36 W			270		4"
45	Comp										

~~Spectr.~~ CCD Temp. -100°C Dome Temp./Hum. -5.0°C / 58.2% Transparency Conditions just cleared @ 19:30 102

Focus 7.04 FANS ON, Then JUST NE FAN

Spectr. Temp. .... Dome Temp./Hum. ....

425 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 l/mm G=4585	30μm	4462 Å	3/4			
								1/2			
								5			
not functioning : 0	3"	7.26	A5					6	SB2 Bln		2.6K
								7			
								1/2			
								8			
not working 80 · due	4"	6.42	B2Vp					9	He-rich Bln	~~st~~ hot pixel on strongest column.	4.3K
to buck imbalance.								10			
								11			
—	5"	6.48	B2V					12	Bln Dbl star	seeing is deteriorating strongest col is 38	4.0K
								13			
								1			
	4"	3.57	O9.5V					14	Bln Dbl star	D on slit, ~~[illegible]~~. Not noticeable	6.4K
								15			

pg 102 #2

Date 1996. January 28/29 Observers [Bln]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc38546	COMP							FeAr clear	60
47	HD34759	5 14 44	+41 42 17	22 10 46		1 30 W			1653
48	COMP							"	60
49	COMP							"	60
50	HD 84441	9 40 11	+24 14 05	22 50 17		2 39 E			171
51	COMP							"	60
52	BIAS(4)			22 58					
CG80322/25	HD 57263	17 15 24	+39 11 05	23 17				4 ×	67ms
CG80326/27	"					0 10 W		2 ×	133ms
cc38553	COMP							FeAr clear	60
54	HD120315	13 43 36	+49 ~~...~~ 48 45	23 40 17		5 51 E			62
55	COMP							"	60
56	COMP							"	"
57	HD154528	17 00 54	+77 48	0 38 05 ~~23 56 37~~		7 54 E ~~8 16 E~~			600
58	COMP							"	60
~~59~~ off									

CCD ~~Spectr.~~ Temp. -100.7°C

Dome Temp./Hum. -7.3°C / 63.6%

Transparency Conditions: cirrus cloud → clear to 104; thick cloud @ 020

Focus: 7.04

N FAN ON

Spectr. Temp. ....

Dome Temp./Hum. -7.9°C / 65.2% after seeing test

425 0 50 1024 4 1 ccdhd.

Comparison Filter / Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60	BG 39 FILTER but				CASS CCD	1800 l/mm G=4585	300μm	4462 Å	16			max
153	not working	3"-4"	V 5.09	B5 V					17	Bln	increasing cloud	5.5k
60									18			1k
60									19			
171	0		V 2.98	G1 II					20	std vel		5.3k
60									21			1.1k
									1/2			
17m		3"-4"	V 6.39	K0 III	ALT=85°		above 300μm		—	Seeing test	no wind	
32m					CCD CCD TV GUIDER				—		Dome west.	
60									22			
62	—	3"-4"	V 1.86	B3 V					23	Bln		
60		hard to tell.							24			
									25			
60	—		V 6.66	A0 ~~[illegible]~~					26	Bln SB2	ARGH! LOST 1st EXPOSURE bias. STUPIDLY BY READING OUT CHIP TWICE! cloudy now	
60									27		useless exposure — all Sat's fault.	

pg #3 (106)

Date 1996 January 28/29 Observers [Blr]/Tm/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38559	BIAS (4)			0 51					—
60-68	FLAT x 9					$0^h 1^m W$	+19°	Tung clear	22
69/70	INBOARD/OUTBOARD							FeAr clear	40/70

Spectr. Temp. ...
Focus ... 7.0
Spectr. Temp. ...

Exp. Mtr	Seeing

~~Spectr.~~ CCD Temp. -100.4°C Dome Temp./Hum. -7.8°C/66.2% Transparency Conditions clouded out 106

Focus 7.04

Spectr. Temp. Dome Temp./Hum. -7.7°C/66.0% @ focus test

425 0⁵⁰,1024 & 1 ccdfmt.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	–					CASS CCD	1800 ℓ/mm G= 4585	306μ	4462Å	1			
[illegible]	22									28			12.9K →12.1K
[illegible]	[illegible]									3/4	focus test	end of night.	

107 Tues/Wed

Date 1996 JAN 30/31 Observers Vys. pym. Tn.

Emulsion Batches:

CCD Spectr. Temp. ...
Focus 6.9[illegible]
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc385 71/72	Inboard / outboard									no filter	T=-100°C
73	BIAS(4)										
74	Comp							FeAr Clear	60s		
75	AC+11 20-103	02 38 56	+10 32 07	18 32 34		0 20 W			615		3.4"
76	comp							"	60s		
77	Comp							"	60s		
78	HD 36395	5 26 18	-03 41 00	18 56 48		2 01 E			774	5.0	3.4"
79	comp							"	60s		
80	BIAS (4)										
81/89	FLATS x 9					1 44E	-1 44	TUNG Hp1/4	9s		
90	BIAS(4)										
91	Comp		1950 + ≈50yr Pr motion	~~22 58~~				FeAr Clear	60s		
92	Vys 25	9 05 56	+27 39	00 17 20		0 14E			945	[illegible]	4"
93	comp							FeAr Clear	60s		

CCD Spectr. Temp. -100.2°C Dome Temp./Hum. -9.3°C 55.0%H Transparency Conditions Part cloudy but soon mostly cloudy

Focus 6.95

Spectr. Temp. Dome Temp./Hum. -11.3°C 63%H

425 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter T=-10.0°C		F= 6.95		CASSCCD	1800l/mm G=6022	306.	6500	3/4	focus test	set for slightly cooler.	max ADU
								1/2	That	Hot pixel, Row 144 Right on major comparison line.	
								5			1.5K
	3"-4"	10.98	M0					6	Vys pgm	(Hα em 170 ADU above bias)	
								7			
								8			
540	3-4"	7.97	M1					9	Vys 9 Marcy Std Vel	thin cloud	250 above bias
								10			
								1/2			
								11			12K
								1/12		(not the brightest of semi close pair)	see
400	4"	9.5	M (and looks it too)					14	Vys pgm	Field drawn 70/1 S/N	above bg
								15		Brighter star looks much more blue.	1.5K
									Then	Snow	

109
pg#1 Wed/Thurs

Date .1996.JAN.31/FEB.1.. Observers ..Ody/Tn..............

Emulsion Batches:
....
....
....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC385 94/95	inboard/outboard			20 27		0 03E	+10 12	FeAr clear	40/70
96	BIAS(4)								
97	Comp							FeAr Clear	60
98	HD36673	05 28 19	-17 53 38	20:38:50	~~00 26 E~~	00 26 E			108s
99	"	"	"	20:41:29		00 23 E			113s
CC38600	"	"	"	20:43:41		00 22 E			101
01	Comp							"	60s
02	Comp							"	60s
03	HD45947	6 25 17	+73 46 22	21 08 19		0 41 E			1400
04	comp							"	60s
05	HD45947	"	"	21 34 49		0 14 E			1400
06	COMP							"	60
07	HD45947	"	"	22 01 10		0 12 W			1400
08	Comp							"	60s
09	Bias(4)			22 25					
10	Comp							"	60s

Spectr. Temp. ...
Focus ....7:1...
Spectr. Temp. ...

Exp Mtr	Seeing
66 39 / 7 49	
2100	
2400	
2200	
9270	3"
9350	2.5"
500	"

CCD Spectr. Temp. -100.3°C Dome Temp./Hum. -12.2°C 54.3% H Transparency Conditions mostly clear now

Focus 7.14 90 again of course

Spectr. Temp. .... Dome Temp./Hum. .... cd

425 050 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG 39 Filter				CASS CCD	1800 l/mm G=4480	306μ	4300Å		focus test	set cooler for expected Big Temp drop	Max Ntu
								1/2			
								5			
12100		8.79	F01b					6	Dby Std.	(Hot pixel was the 9k max)	= 3 K
12400		"	"					6	"		=3 K
12200		"	"					6	"	s/> 200/1 S/N	3.2K
								7			1.1K
								8			.8K
9,270	3"	6.62	F2					9	Dby pgm	> 200/1 S/N	3.2K
								10			.75K
9,330	2.3"	6.62	F2					11	"		
								12			
9,500	"	"	"					13	"		
								14			
								1/2			
								14			

pg. 2 Wed/Thurs.

1/1

Date 1996 Jan 31 / Feb 1. Observers Dby / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC38611	HD65301	07 52 58	59 19 08	22 32 54		00 46E			1000s
12	Comp							FeAr Clear	60
13	HD65301	07 52 58	59 19 08	22 53 01		00 25 E			1000s
14	Comp							"	60s
15	HD65301	07 52 58	59 19 08	23 13 02		00 02 E			1000s
16	Comp							"	60s
17	Bias (4)			23 32					
18	Comp							"	60s
19	HD 77601	08 58 30	48 55 40	23 37 39		00 48 E			800s
20	Comp							"	60s
21	HD 77601	08 58 30	48 55 40	23 54 27		0 34 E			700s
22	Comp							"	60s
23	HD 77601	8 58 30	+48 55 40	00 09 08		00 16 E			700s
24	Comp							"	60
25	Bias (4)			00 28					
26	Comp			~~X~~				"	60

CCD
~~Spectr.~~ Temp. -10.2°C Dome Temp./Hum. -13.9°C 61.3%H Transparency Conditions Thin cloud only

Focus 7.14

Spectr. Temp. Dome Temp./Hum. -14.6°C 62.5%H

c lambda 425 n 50 1024 4 1 ccdfmt 5 A-

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
10200		B 6.16	F2V	CASSCCD	1800 l/mm G=4480	306µ	4300Å	15	Dby Pgm		
								16			
10700		B 6.16	F2V					17	Dby Pgm	> 200/1 S/N	
								18		>	
10600		B 6.16	F2V					19	Dby Pgm		
								20			
								1/2			
								20			
> 10200 Exposure mtr off for short time (Balanced now)		B 6.40	F6II-III					21	Dby Pgm		
								22			
10300	2.3"	B 6.40	F6II-III					23	Dby Pgm		
								24			800µm
10300	3	6.40	F6II-III					25	"		
								26			
								1/2			
								26			

pg. 3 Wed/Thurs.
113

Date 1996 Jan 31/Feb 1 Observers Dby/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC38627	HD61035	07 32 11	24 35 05	00 32 44		1 43 W			1400s
28	Comp							FeAr Clear	60s
29	HD61035	07 32 11	24 35 05	00 59 26		2 10 W			1400s
30	Comp							"	"
31	HD61035	07 32 11	24 35 05	01 26 33		2 37 W			1400s
32	Comp							"	60s
33	Bias (4)			01 50					
34	Comp							"	60s
35	HD61295	07 33 30	32 14 20	02 01 47		3 10 W			1300s
36	Comp							"	60s
37	HD61295	07 33 30	32 14 20	02 26 39		3 35 W			1300s
38	Comp							"	60s
39	HD61295	07 33 30	32 14 20	02 51 56		4 00 W			1300s
40	Comp							"	60s
41	Bias (4)			03 20					
42	Comp							"	60s

CCD Temp. ...
Focus ... 7.14
Spectr. Temp. ...

Exp Mtr	Seeing

CCD ~~Spectr.~~ Temp. -101.3°C Dome Temp./Hum. -14.8°C/63.6% Transparency Conditions Clear 114

Focus 7.14

Spectr. Temp. Dome Temp./Hum. -15.5/66.9%

425 0 50 1024 4 1 ccd fast Mar Pdy

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ C lambda	P.H.	Program	Remarks	Quality
BG 39 Filter 10300	2-3"	B 6.24	FO	CASS CCD	1800 l/mm G=4480	306μ	4300Å	27	Dby Pgm	bright Moon overhead	3.6K
								28			
11150		B 6.24	FO					29	"		
								8			
11100		B 6.24	FO					9	"		
								10			
								1/2			
								10			
2800		B 6.52	F6II					11	"		
								12			
11500		B 6.52	F6II					13	"		
								14			
9900		B 6.52	F6II					15	"	clouds moving in.	
								16			
								1/2			
								16			

pg. 4 Wed/Thurs
115

18 Date 1996 Jan31/Feb.1. Observers Dby/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC38643	HD83808	09 35 49	10 20 50	03 22 18		2 10 W			200s
44	"	"	"	03 26 06					"
45	"	"	"	03 30 08		2 19 W			"
46	Comp							FeAr clear	60s
47	Comp							"	"
48	HD 96707	11 03 19	+67 45 09	03 44 46		1 18 W			1013
49	Comp							"	60s
50	HD 96707	"	"	04 05 06		1 39 W			1056
51	Comp							"	60s
52	HD96707	"	"	04 26 56		2 2 W			1078s
53	Comp							"	60s
54	Bias (4)			~04 45					
55	Comp							"	60s
56	~~HD~~ HD101107	11 33 01	44 10 48	04 56 17		01 54 W			600s
57	Comp							"	60s

~~Spectr.~~ CCD Temp. −102.0°C Dome Temp./Hum. 15.6°C 67.5%H Transparency Conditions Cloudy partly ... 116

Focus 7.14

Spectr. Temp. .... Dome Temp./Hum. .... 425 0 50 1024 4 1 ccdfmt MAX

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	~~Emulsion~~ c lambda	P.H.	Program	Remarks	Quality
	205	BG39 11000		B 4.01	F6II+AIV	CASS CCD	1800 l/mm G = 4480	306μ	4300Å	17	Dby Pgm		
	"	14000		"	"					19	"		
	"	14700		"	"					21	"		5A
	[illegible]									22			
	"									22			
	[illegible]	11,008	2"-3"	B 6.28	FOpSr					23	Dby Pgm		
	[illegible]									24			9.70
	[illegible]	11100	3"	"	"					25	Dby Pgm		
	[illegible]									26			
	[illegible]	11200		"	"					27	Dby Pgm		
	[illegible]									28			
										1/2			
	[illegible]									28			
	[illegible]	10900		B 5.92	F2II-III					9	Dby Pgm		
	[illegible]									10			

pg. 5 Wed/Thurs.
117
Date 1996 Jan 31/Feb. 1 Observers Dby/Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc 38658	HD101107	44 10 48	11 33 01	05 09 23		2 08 W			600s
59	Comp							FeAr Clear	60s
60	HD 101107	"	"	05 24 26		2 22 W			600s
61	Comp							"	60s
62	Comp							"	60s
63	HD89025	10 11 08	+23 54 57	05 41 42		3 54 W			120s
64	HD89025	"	"	05 44 14		3 56 W			120s
65	"	"	"	05 46 49		3 59W			160
66	Comp			-				"	60s
67	Bias(4)								
68	Comp							"	60s
69	HD111812	12 46 50	28 05 06	05 57 20		1 39 W			400s
70	"	"	"	06 04 31		1 46W			400s
71	"	"	"	06 11 42		1 53W			400
72	Comp							"	60s
73	Comp							"	"

CCD
Spectr. Temp.
Focus 7.14
Spectr. Temp.

Exp Mtr	Seeing
10000	
10000	
12000	
12000	
12000	
11000	
11000	
11000	

CCD ~~Spectr.~~ Temp. .... Dome Temp./Hum. -15.4°C/67.5% Transparency Conditions Partly Cloudy

Focus 7:14

Spectr. Temp. .... Dome Temp./Hum. .... 425 0 50 1024 4 1 ccdfmt MAX

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ C lambda	P.H.	Program	Remarks	Quality
BG39 10700		B 5.92	F2II–III	CASS CCD	1800 l/mm G=4480	306μ	4300Å	11	Dby Pgm		
								12			
10100		"	"					13	"		
								14			
								14			
12200		3.75	F0III					15	Dby std		
12400		"	"					"	"		
12400		"	"					"	"		
								16			
								1/2			
								16			
10600		B 4.61	G0III					17	Dby Std		
10600		"	"					"	"		
11200		"	"					"	"		
								18			
								18			

119
pg # C   Wed / Thurs

Date 1996 Jan 31 / Feb 1   Observers Dby / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 38674	HD 8890	1 22 34	+88 46 26	6 37 30		11 29 E			50s
75	"	"	"	6 38 56					60
76	"	"	"	6 40 22		11 26E			50s
77	Comp							FeAr Clear	60s
78	Bias (4)								
CG 80 28/31	HD 144579	16 01 30	+39 24 00	6 55				4 x	67
32/33	"					0 40E		2x	133
CC 38679/80	inboard/outboard		HART			0 35E	+39°		40/70
CC 38681/90	FLATS	x 10				"	"	TUNG Clear	33s

Exp. Mtr.	Seeing
13200	
13200	
13200	
	NL
	3"

Spectr. Temp. .... Dome Temp./Hum. -15.7°C. 67%H Transparency Conditions 120

Focus ..... 7.14 ....

CCD Spectr. Temp. -101.7°C .... Dome Temp./Hum. -15.6°C ....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
13900		262	F7Ib-IIv	C45SCCD	1800 l/mm G=4480	306µ	4300Å	19	Dwy pgm		
13200								19			
13200								19			
	ALT = 80°			Above		306µ	slit		Seeing test	sky coming on bright	
	3"	6.66	G8V						"		
								30/31	Focus		
								2			134K

pg#1 February 1/2

12 Date 1996 ~~[illegible]~~ Observers {Vys}/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38691/92	INBOARD/OUTBOARD							FeNe clear	20/30
93	BIAS x4			18 57					—
94	COMP							"	20
95	HD1326	0 12 42	+43 27	18 59 15		3 21 W			700
96	COMP							"	20
97	COMP							"	"
98	AC-4 2410-76	03 02 34	-04 21 13	19 20 36		1 18 W			2100
99	COMP							"	"
cc38700	BIASx4			19 58					—
01	COMP							"	20
02	AC+11 20-183	02 38 56	+10 32 07	20 05 52		2 41 W			3000
03	COMP							"	20
04	BIASx4			20 58					—
05	COMP							"	20
06	AC+17 449-111	03 38 05	+16 21 12	21 04 20		2 25 W			2100
07	COMP							"	20

CCD ~~Spectr.~~ Temp. -100.0°C Dome Temp./Hum. -10.7°C/56.1% @ focustest Transparency Conditions a few scattered clouds, bright moon rising. 122

Focus 7.03

Spectr. Temp. Dome Temp./Hum.

422 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter				CASS CCD	1800 l/mm G=5158	306µ	5302Å ±1Å	3/4	focus test	spec. controller resets	
								1		forgot to unwrap 2nd ary mirror blah.	
								5			
3810	2"	V 8.07	M1Ve					6	Marcy Std Vel {V4s} RV	V4s 85A	3.9K
								7			
								8			
1100	2"	V 10.5	M0					9	{V4s} RV	V4s 413, never observed b4	~300 above b/g
								10			
								1			
								11			
1215	2"-3"	V 10.98	M0					12	{V4s} RV	V4s 401A, never observed b4; B is very faint to SE (~20 arc secs)	500 above b/g
								13			
								1			
								14			
1262	2"-3"	V 11.1*	M0					15	{V4s} RV	V4s 428B never observed of; no published RV; A is much brighter to E	500 above b/g
								16		*seems brighter ~10", A seems brighter, too	

123
Pg #2

Date 1996 February 1/2 Observers {Vys}/Smt

Emulsion Batches:

Spectr. Temp. ...
Focus 7
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC38708	BD+16 502	03 38 12	+16 21 30	21 44 01		2 57 W			1630	[illegible]60	2-3"
09	COMP							FeNe clear	20		
10	BIAS x 4			22 14					—		
11	COMP							"	20		
12	HD36395	05 26 18	-03 41	22 21 02		1 35 W			975	4190	3"
13	COMP							"	20		
14	COMP							"	20		
15	BD+02 1729	07 34 11	+02 24 52	22 48 27		0 0			1300	[illegible]80	2-3"
16	COMP							"	20		
17	BIAS x 4			23 12					—		
18	COMP							"	20		
19	AC+36 28826	08 22 03	+35 21	23 24 23		0 01 E			2000	[illegible]	2"
20	COMP							"	20		
21	BIAS x 4			0 02					—		
22-26	FLAT x 5					0 09 W	+35°	Tung ½ Ap	6		
27/28	INBOARD/OUTBOARD			~0 54		"	"	FeNe clear	20/30		

Spectr. Temp. −100.4°C Dome Temp./Hum. −12.9°C/61.3% Transparency Conditions clear enough, fallish moon ripe overhead. 124

Focus 7:03

Spectr. Temp. Dome Temp./Hum. −12.8°C/59.7% @ flats.

422 0 50 1024 4 1 ccdinit.

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1630	1560	2-3"	V 10.3 *	M0	CASS CCD	1800 ℓ/mm G=5158	3dpu	5302 Å ±1 Å	17	{V4s} RV	V4s 428A, no pub RV, seems about V=9^m B seems ~1^m brighter as well	700 above b/g
20									18			
–									1			
20									19			
975	4290	3"	V 7.97	M1					20	~~[illegible]~~ Marcy std vel {V4s} RV	V4s 9	2.6K
20									21			
20									22			
1500	1580	2-3"	V 9.6	M0					23	{V4s} RV	V4s 503. ~~[illegible]~~ near bright moon.	800 above b/g
20									24			
–									1			
20									25			
2000	• 1400 estimated — forgot to reset until 260s had passed.	2"	V 10.7	M0					26	{V4s} RV	V4s 253AB near moon, some thin cloud coming bits of solar	<300 above b/g
20									27			
–									1			
6									28		flats show dust on slit.	4.8K → 11.3K
1200									29/30	focus test	cloud too thick then clear later →	

12§
pg #3

Date 1996 February 1/2   Observers {Vys}/Smt

Emulsion Batches: ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38729	COMP							FeNe clear	20		
30	BD -08 2689	09 23 57	-08 49 46	1 28 41		1 03 W			2005	1200	2" →4"
31	COMP							"	20		
32	BIAS x 4			2 07					—		
33	COMP							"	20		
34	BD+01 2447	10 23 49	+01 21 36	2 08 35		0 24 W			900	1100	2-3"
35	COMP							"	20		
36	COMP							"	"		
37	BD-01 322	10 06 59	-02 10 56	2 30 22		1 18 W			1800	[illegible]	3"
38	COMP							"	20		
39	BIAS x 4			3 12					—		
CG80334→37	HD103095 x 4	11 47 13	+38 26 10						.067		2"
38/39	" x 2				3 09	0 13 E	Alt 83°		.133		

CCD Temp. ...
Focus ... 7.
Spectr. Temp. ...

~~Spectr.~~ CCD Temp. -100.4°C Dome Temp./Hum. -13.0°C/58.4% Transparency Conditions pretty clear - hazy, moon setting now. 126

Focus 7.03

Spectr. Temp. Dome Temp./Hum. -13.1°C/59.0% @ seeing test.

FANS OFF

422 0 50 1024 4 1 ccdfast.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ℓ/mm G=5158	306μ	5302 Å	5			
1200	2" → 4"	V 10.52	M0					6	{Vys} RV	Vys 268, hazy here	360 above bkg
								7			
								1			
								8			
1100	2"-3"	V 9.65	M2					9	Marcy-Benitz {Vys} RV Std.	Vys 127, hazy (slightly)	370 above bkg
								10			
								11			
1080	3"	V 10.6	M0					12	{Vys} RV	Vys 568. hazy.	250 above bkg
								13			
								1			
	2"	V 6.45	G8 IIIp	EEV CCD TV GUIDER		above 306μ		—	seeing test	Dome SW, medium SW wind, a few clouds, moon setting now, very good for winter.	
		"	"					—	"		

123 pg #1

Date 1996 ~~[illegible]~~ February 2/3 Observers DBy/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38740/41	INBOARD/OUTBOARD			18:11	18:15	0^h	~+40°	Fe Ar clear	40/70
42/43	"					0^h	+43°	"	"
44	BIAS(4)			02 27					—
45	COMP							"	60
46	HD83808	9 35 49	+10 20 50	02 38 16		1 34 W			200
47	"	"	"	02 42 01		1 38 W		—	200 ~~[illegible]~~
48	"	"	"	02 45 36		1 42 W			200
49	Comp							"	60
50	COMP							"	60
51	HD77601	8 58 30	+48 55 40	02 58 36		2 42 W			900
52	COMP							"	60
53	HD77601			03 16 52		3 02 W			924
54	COMP							"	60
55	HD77601			03 35 01		3 17 W			800
56	COMP							"	60
57	BIAS(4)								—

CCD ~~Spectr.~~ Temp. -100.4°C Dome Temp./Hum. -17.5°C / 55.4% @ 2nd focus test Transparency Conditions just cleared, hazy. 128

Focus 7.14 (2 o'clock clear)

FANS ON

Spectr. Temp. Dome Temp./Hum.

422 0 50 1024 4 1 ccdflat.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 ℓ/mm G=4479	306μm	4300Å ±1Å	3/4	focus test	T = -12.7°C, F = 7.10 set just a bit cool, dome closed	
								3/4	"	in focus, dome open for a bit.	
								1			
								5			
11.7K	8"	B 4.01	F6 II + A1 V					6	Dby F star	S/N ~ 200:1	3.2K
11.9K	"	"	"					7	"	"	3.2K
12.9K	"	"	"					6	"	S/N ~ 210:1	3.5K
								8			
								9		S FAN OFF now	
10.4K	7"	B 6.40	F6 II - III					10	Dby F star	S/N ~ 195:1	3.2K
								11			
12.3K	6"-5"	"	"					12	"	S/N ~ ~~[illegible]~~ 215:1	4.0K
								13			
11.1K	4"-5"	"	"					~~13~~ 12	"	[illegible] in wrong cache S/N = 175: [illegible] time-[illegible]	3.6K
								13	*		
								1			

129
pg #2

Date 1996 February 2/3 Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
cc 38758	COMP							Fe/Ar clear	60s		
59	HD96707	11 03 19 ~~67 45 09~~	67 45 09	03 58 39		1 45 W			1300s	12.	
60	Comp							"	60s		
61	HD96707	"	"	04 24 14		2 10 W			1300s	11.5k	
62	Comp							"	60s		
63	HD96707	"	"	04 49 24		2 36 W			1300	10.7K	6"
64	Comp							"	60s		
65	Bias (4)			5 14					—		
66	COMP							"	60		
67	HD101107	11 33 01	+44 10 48	05 21 37		2 33 W			900	3K	5-6"
68	COMP							"	60		
69	HD101107			05 39 17		2 51 W			965	2K	6"
70	COMP							"	60		
71	HD101107			05 58 13		3 10 W			965	1K	5"
72	COMP							"	60		
73	Bias (4)			6 20							

Spectr. Temp.
Focus 7.
Spectr. Temp.

131

CCD Spectr. Temp. -100.5°C Dome Temp./Hum. -18.0°C / 56.9% Transparency Conditions clear → hazy, moon all its way down

Focus 7.14 N FAN ON

Spectr. Temp. .... Dome Temp./Hum. -18.4°C / 58.4% @ 1st bias (4) 422 0 50 1024 4 1 ccdfast.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 ℓ/mm G=4479	300μ	4300Å	14			
12K		B 6.28	F0pSr					15	Dby F Star		
								16			
11.5K		"	"					17	"		
								18			
10.7K	6"	"	"					19	"		3.9K
								20			
								1			
								21			
11.3K	5"-6"	B 5.92	F2 II - III					22	Dby F star		3.5K
								23			
11.2K	6"	"	"					24	"		3.2K
								25			
11.1K	5"	"	"					26	"		3.4K
								27			
								1			

131 pg #3

Date 1996 February 2/3 Observers Dby/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CG80340-43	HD 128718 x 4	14 33 24	+48 39			0			.067
44/45	" x 2				6 24	0 21 W	Alt 84°		1133
CC38774	COMP							FeAr clear	60
75	HD 89025	10 11 08	+23 54 57	06 36 40		4 57 W			180
76	"			06 40 13		5 01 W			180
77	"			06 43 31		5 04 W			180
78	COMP							"	60
79	COMP							"	"
80	HD111812	12 46 50	+28 05 06	06 52 33		2 43 W			430
81	COMP							"	60
82-91	FLAT x10					2 47 W	+28°	Tung clear	33
92/93	INBOARD/OUTBOARD					0 0	"	FeAr clear	40/70

~~Spectr.~~ CCD Temp. -102.0°C Dome Temp./Hum. -19.8°C / 62.3% @ seeing test end. Transparency Conditions hazy, moon behind trees. but sun coming BL

Focus 7.14

Spectr. Temp. Dome Temp./Hum. -20.1°C / 63.5% @ ~~[illegible]~~ focus ~~[illegible]~~ test 422 0 50 1024 4 1 ccdfoc.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	5"	V 6.7	F2	~~[illegible]~~ EEV CCD		above 30μm	–	—	seeing test	Dome WNW, no wind, hazy. Cold snap! Bad seeing but improving	
	4"-5"			TV GUIDER			–	—	"	N FAN ON bldg probably high	
BG 39 FILTER				CASS CCD	1800 l/mm G=4479	30μm	4300 Å	28			
12.4K	4"-5"	B 3.75	F0III					29 ~~30~~	Dby Sp. Std		3.9K
12.4K	4"	"	"					30	"		3.5K
11.9K	"	"	"					29	"		
								31			
								5			
10.3K	4"	B 4.61	G0III					6	Dby Sp Std	sky getting bright	3.0K
								8			
								2			12.5K →12.3K
								3/4	focus test	end of night, didn't check	

133
pg #1

Date 1996 February 3/4 Observers Dby/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc 38794/95	INBOARD/OUTBOARD							FeAr clear	40/70
96	BIAS(4)			19 02					—
97	COMP							"	60
98	HD 216131	22 45 11	+24 04 25	19 18 58		5 15 W (PLATFORM)			564s
99	Comp							"	60s
cc 38800 - 809	~~Comp~~ FLAT x 10					(PLATFORM) 0	-34°	Tung clear	33
10	BIAS(4)			20 16					—
11	COMP							FeAr clear	60
12	HD 29737	04 35 57	-24 40 40	20 19 28		0 49 W			2000
13	COMP							"	60
14	BIAS(4)			21 00					—
15	COMP							"	60
16	HD 20902	3 17 11	+49 30 19	21 03 57		2 18 W			60
17	"			21 05 24		2 19 W			60
18	"			21 06 54		2 20 W			60
19	COMP							"	"

Spectr. Temp.
Focus 7
Spectr. Temp.

Exp Mtr	Seeing
36 39 f. 12K	
1K	4"
1K	5"
3K	3"
1K	
2K	

Spectr. Temp. -100.5 °C   Dome Temp./Hum. -14.4 °C/6.20 °C @ focus test   Transparency Conditions thin cloud, was snowing 13.4 → clear → cloud → clear; FANS OFF; full moon

Focus 7.14

Spectr. Temp. ....   Dome Temp./Hum. ....   422 0 50 1024 4 1 ccdtest

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 ℓ/mm G=4479	306μ	4300 Å	3/4	focus test	set a bit cool but T dropping to record low overnight.	
								1			
								5			
7K	4"	B 4.41	G8 III					6	Dby Sp Std	getting close to platform clouded out.	
								7			
								8		Snow, dome closed	13.4? →
								1		clear again, opened up	
								9			
10.1K	5"	B 6.50	G6 III					10	Dby Sp Std	heavy refraction.	
								11			
								1			
								12			
23K	3"	B 2.27	F5 Ib					13	Dby Sp Std		10.6K
24K	↓	↓	↓					14	"		
27K								15	"		
								16			

135
pg#2

Date 1996 February 3/4 Observers D.by./Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38820	COMP							FeAr Clear	60
21	HD45947	06 25 17	+73 46 22	21 15 28		0 19E			1600s
22	COMP							"	60
23	HD45947	"	"	21 45 29		0 11 W			1605s
24	COMP							"	60
25	HD45947	"	"	22 15 42		0 42 W			1600
26	Comp							"	60s
27	Bias(4)			22 45					
28	Comp							"	60s
29	HD8890	01 22 34	+88 46 26	22 58 11		5 19 W			90
30	"			23 00 16		5 21 W			90
31	"			23 02 17		5 23 W			90
32	COMP							"	60
33	Comp							"	60s
34	HD62140	7 37 24	63 04 18	23 14 26		0 31W			1600s
35	Comp							"	60s

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. -16.5°C/58.9% Transparency Conditions clear, full moon 136

Focus 7.14

FANS OFF

Spectr. Temp. Dome Temp./Hum.

422 0 50 1024 4 1 ccdfmt.

Companion Filter	Companion Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	60	BG 39 FILTER				CASS CCD	1800 l/mm G= 4479	300μm	4300 Å	17			
	10.7s	10.3K	3"-4"	B 6.62	F2					18	Dby F star		
	60									17			
	10.5s	10.9K		"	"					19	"		
	60									20			
	10.	11.1K		"	"					21	"		
	60									22			
										1			
	60s									23			
	90	27.5K	3"-4"	B 2.62	F7Ib-IIv					24	Dby F star	telescope reversed, sort of	
	90	27.7K	"	"	"					25	"		
	90	27.3K	"	"	"					26	"		12.7K
	60									27			
	60s									28			
	10.5	10.1K		B 6.75	F0pSrEu					29	Dby F Star		
	60									30			

Pg. 3
137

Date 1996 Feb. 3/4 Observers Dby/Smt

Emulsion Batches:

CCD Spectr. Temp.
Focus 7.14
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CC 38836	HD62140	7 37 24	63 04 18	23 44 37		1 03W			1600s	BE 39 Filter 10.4K	
37	Comp					~~1 03W~~		FeAr Clear	60s		
38	HD62140	"	"	00 15 46		1 34W			1600s	10.2K	
39	Comp							"	60s		
40	Bias (4)			00 45							
41	Comp							"	60s		
42	HD61295	7 33 30	32 14 20	00 57 05		2 18W			1400s	10.4K	
43	Comp							"	60s		
44	HD61295	"	"	01 23 35		2 44W			1400s	10.1K	
45	Comp							"	60s		
46	HD61295	"	"	01 50 04		3 12W			1400	10.5K	5"
47	Comp							"	60		
48	Bias (4)			2 16					—		
49	COMP							"	60		
50	HD61035	07 32 11	+24 35 05	2 22 01		3 52 W			1800	10.4K	1-1"

CCD ~~Spectr.~~ Temp. -102.5°C Dome Temp./Hum. -17.9°C/62% Transparency Conditions clear, full ~~moon~~ /38

Focus 7.14

Fans off

Spectr. Temp. .... Dome Temp./Hum. ....

422 0 50 1024 4 1 ccdfmt

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	600s	BG 39 Filter ~~10.1K~~		FOpSrEu	B 6.75	CASS CCD	1800 ℓ/mm G=4479	306μ	4300Å	5	Dby Pgm		
r ar	60s									7			
	600s	10.2K		B 6.75	FOpSrEu					8	"		
	60s									9			
										1			
	60s									11			
	1400s	10.4K		B 6.52	F6 II					13	Dby F Star		~~[illegible]~~
	60s									12			
	400s	10.1K		"	"					14	"		
	60s									16			
	1400	10.3K	5"	"	"					15	"		3 ok
	60									16			
	—									1			
	60									17			
	1400	10.4K	4"-7"	B 6.24	F0					18	Dby F star	variable seeing	

139
pg #4

Date 1996 February 3/4 Observers Dby / Smt

Emulsion Batches:

CCD
Spectr. Temp.
Focus ......7.
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38851	COMP							Fe Ar clear	60	39 FILTER	
52	HD61035	07 32 11	+24 35 05	02 55 31		4 25W			1800s	0.1K	4-6"
53	COMP							"	60		
54	HD61035	"	"	03 28 35		5 06 W			2250	0.00K	5-6"
55	COMP							"	60		
56	Bias(4)			~04 10							
57	Comp							"	60s		
58	HD 83808	09 35 49	+10 20 50	04 16 27		3 16 W			150	.9K	4"
59	"			04 19 30		3 19 W			150	.7K	"
60	"			04 22 21		3 22 W			150	.8K	"
61	COMP							"	60		
62	COMP							"	"		
63	HD77601	08 58 30	+48 55 40	04 33 22		4 19 W			800	.2K	4"
64	COMP							"	60		
65	HD77601			04 50 06		4 37W			840s	.3K	
66	Comp							"	60		

~~Spectr.~~ CCD Temp. -101.9°C Dome Temp./Hum. -18.9°C/62.0% Transparency Conditions clear, full moon setting now

140

Focus 7.14

FANS OFF

Spectr. Temp. Dome Temp./Hum.

422 0 50 1024 4 1 ccdfmt

Comparison Filter	Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
C	60	BG 39 FILTER				CASS CCD	1800 ℓ/mm G=4479	300μ	4300 Å	19			
	150	10.1K	4"-6"	B 6.~~24~~	~~[illegible]~~ F0					20	Dby F star		
	60									22			
	250	10.00K	5"-6"	"	"					21	"		
	60									23			
										1			
	60									27			
	150	10.9K	4"	B 4.01	F6 II + A1 V					24	Dby F star		
	150	11.7K	"	"	"					25	"		
	150	10.8K	"	"	"					26	"		3.2K
	60									28			
										7			
	300	10.2K	4"	B 6.40	F6 II - III					8	Dby F star		5.2K
	60									9			
	840	10.3K		"	"					10	"		
	[illegible]									11			

pg. 5
141

Date 1996 Feb. 3/4 Observers Dby / Smt.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC 38867	HD77601	08 58 30	48 55 40	05 07 28		4 55 W			870s
68	Comp							Fe Ar Clear	60s
69	Bias (4)			5 25					—
70	Comp							"	60s
71	HD89025	10 11 08	+23 54 57	05 30 19		3 54 W			120
72	"			05 32 50		3 57 W			130
73	"			05 35 35		4 00 W			140
74	Comp							"	60
75	Comp							"	"
76	HD111812	12 46 50	+28 05 06	05 52 20		1 46 W			430
77	COMP							"	60
78	HD111812	"	"	06 02 21		1 56 W			430
79	Comp							"	60
80	HD111812	"	"	06 12 24		02 06 W			430
81	Comp							"	60
82	Bias(4)			06 23					

CCD
~~Spectr.~~ Temp. .... Dome Temp./Hum. -18.8°C/61.2% Transparency Conditions Clear, Moon almost down 142

Focus 7:14

Spectr. Temp. .... Dome Temp./Hum. .... Fans Off

422 0 50 1024 4 1 ccdfmt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Clambda	P.H.	Program	Remarks	Quality
BG 39 10.4K		B 6.40	F6 II - III	CASS CCD	1800 l/mm G=4479	306μ	4300Å	12	Dby F Star		
								13			
								1			
								14			
10.8K		B 3.75	F0 III					15	Dby Sp Std		
10.6K		"	"					16	"		
10.9K		"	"					17	"		
								18			
								19			
10.1K	5"	B 4.61	G0 III					20	Dby Sp Std		
								21			
10.7K		"	"					22	"		
								23			
10.2K		"	"					24	"		
								25			
								1			

143
pg #6

Date 1996 February 3/4 Observers Dby / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CG80346→49	HD135891 x 4	15 12 30	+37 26						,067
50/51	" x 2				06 31	0 07 E	83° Alt		.133
cc38883	COMP							FeAr clear	60
84	HD101107	11 33 01	+44 10 48	06 41 37		3 54 W			730
85	COMP							"	60
86	HD101107	"	"	06 57 23		4 08 W			450
87	Comp							"	60
88	BIAS (4)			07 10					—
89/90	INBOARD/OUTBOARD					0 0 5E	+38°	"	40/70

Spectr. Temp. ...
Focus 7
Spectr. Temp. ...

Exp Mtr	Seeing
	4"
	4"
Em 39 FILTER	
10.3K	4.5"
10.3K	4"

~~Spectr.~~ CCD Temp. -102.0°C   Dome Temp./Hum. ~-18.8°C/61.5% @ seeing test   Transparency Conditions clear, full moon behind trees, twilight beginning soon.

Focus 7.14   FANS OFF   144

Spectr. Temp.   Dome Temp./Hum. ~-18.5°C/62.0% @ focus test   (cass) 422 0 50 1024 9 1 ccd fat.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	4"			EEV CCD TV		above		—	seeing test	Dome SW, very very light SE wind, clear, full moon set behind trees, twilight starting soon.	
	4"			GUIDER		30μm		—	"		
BG 39 FILTER				CASS CCD	1800 l/mm G=4476	30μm	4300 Å	27			
10.3K	4"-5"	B 5.92	F2 II – III					28	Dby F star		2.9K
								30			
10.3K	4"	"	"					29	"	getting a bit of sky background now.	
								6			
								1			
								3/4	focus test		

145
pg#1

sun/mon

Date 1996 Feb 4/5 Observers [Rm]/Tn/Smt

Emulsion Batches:

Spectr. Temp.

Focus 7.06

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cc 388 91/92	Inboard/Out Board Hartmann					0 0	≈35°	FeAr Clear	10/60	30,90 Filter	
93	BIAS (4)			18 25							
94	Comp							FeAr Clear	FeAr Clear 60s		
95	HD 203156	21 15 23	+37 49	18 32 19		6 02 W			500	49K	3"-4"
96	Comp							"	60s		
97	Comp							"	"		
98	HD214975	22 36 54	+56 19	18 51 22		5 30 W			2309	3740	3"
99	Comp							"	60s		
cc 38900	BIAS(4)			19 33					—		
01	COMP							"	60		
02	HD215159	22 38 15	+53 23 08	19 42 00		5 45 W			277	4200	3-4"
03	COMP							"	60		
04	Comp							"	60		
05	HD214975	22 36 54	+56 19 00	19 54 32		6 22 W			1649	3510	4"
06	COMP							"	60		

CCD Spectr. Temp. –100.5 °C Dome Temp./Hum. –13.7°C / 5522Å Transparency Conditions Part cloudy → clear 146

Focus 7.06

N FAN ON

Spectr. Temp. Dome Temp./Hum. c λ 422 0 50 1024 4 1 CCDFmTmAx

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
OG560 Filter				CASSCCD	1800 l/mm G=5945	306μ	6400Å	3/4	focus test	FORGOT TO HOME HARTMANN MASK. IT WAS INBOARD UNTIL LINE BELOW.	
								1/2			
								5			
4.9K	3"–4"	5.8 –5.9	F2					6	Rm pgm	N1334(?) 250/1 S/N Telescope east side of Pier	5K
								7			
								8			
3,740	3"	⟨v⟩ 8.40	~G0Ib					9	Rm pgm	Z Lac	
								10		HARTMANN MASK IN COM INBOARD	
								1		HARTMANN MASK HOMED	
								11			
~~4,~~200	3"–4"	v 6.19	K2					12	Rm	≈ 29th column Z Lac velocity comparison *	5.5K
								13			1.5K
								14		con series C	1.5K
2510	4"	8.40	~G0Ib					15	Rm pgm	≈ 30th column	5.0K
								16			

147p4#2

sun/mon

Date 1996 Feb4/5 Observers [R.m] / T+ / Sest

Emulsion Batches:

Spectr. Temp.

Focus 706.

CCD Temp. –

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc38907	COMP							FeAr clear	60		
08	VY PER	02 20 19	+58 28 06	20 36 50		3 41 W			3000	910	2-3"
09	COMP							"	60		
10	BIAS (4)			21 30					–		
11	COMP							"	60		
12	HD25361	03 56 42	+58 23	21 35 20		2 32W			1220	500	2-3"
13	COMP							"	60		
14	Comp							"	60		
15	HD30282	04 41 06	+36 32 00	22 04 21		2 18 W			1226	+400	2-3"
16	comp							"	60		
17	comp							"	60		
18	HD44990	06 19 49	+07 08 25	22 34 32		0 58W			457	5.00	3-4"
19	Comp							"	60		
20	BIAS (4)			22 45					–		
21	Comp							"	60		
22	IRis	04 20 44	Feb6/96 19 27 29	22 54 19		3 50W			2090	1.15	3"

Spectr. Temp. .... Dome Temp./Hum. -15.9°C / 59.2% Transparency Conditions ... mostly clear, clear

Focus .....7.06............... N FAN ON full moon still rising

~~Spectr.~~ CCD. Temp. ~~-~~ 100.9 °C .... Dome Temp./Hum. .... (Press 103.25 Kps and Falling)

c λ (WSW Wind 4 Kms/hr) 422 0 50 1024 4 1 ccd tnt

Exp. Mtr.	Seeing	√ ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	ADU Quality
OG 560 Filter				CH55CCD	1800 l/mm G= 5945	306μ	6400Å	17		Telescope on E side of piers.	
910	2"-3"	10.8 - ~~11.66~~	F5 - F9					18	Rm Cepheid		1.4K
		~~10.8 11.66~~	~~F5 F9~~					19			
								1			
								19			
5100	2"-3"	7.30 -8.07	F6Ib -G2Ib					20	Rm Cepheid	RX Cam [> 300:1 S/N]	10K
								21			
								22			
4,400	2"-3"	7.9 - 8.8	F6-G1					23	Rm Cepheid	AW Per	8K
								24			
								25			
5,500	3"-4"	6.5 -8.0	F7Iab -K1Iab					26	Rm Cepheid		10K
								27			
								1/2			
								27		Dragster Field Right on	
1625	3"	8.9	G2					28	Asteroid	as Std Vel	26K

149
P9#3

Sun/mon

Date 1996 Feb 4/5 Observers [Rm]/Tn/Sat

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc38923	COMP							FeAr clear	60
CG80352→55	HD42126/7 x4	06 04 00	+48 44				Alt 68°	4x	.067
56/57	" x2				23 43	2 13 W		2x	.133
58→61	HD74010 x4	08 36 18	+49 15				ALT 85°	4x	.067
62/~~64~~63	" x~~3~~2							3x	.133
CG80364/67	~~HD~~ BD+37 2174 x4	11 16 12	+37 19 00				ALT 63°	4x	.067
68/69	~~HD~~ x							2x	.133
cc38924	BIAS(4)			2343					
25	comp							FeAr clear	60s
26	HD25361	03 56 42	+58 23 00	00 41 55		5 39 W			1221
27	comp							"	60s
28	BIAS(4)			01 06					
29	comp							"	60s
30	HD29587	4 34 30	+41 57 00	01 15 17		5 33 W			1086
31	comp							"	60s

Spectr. Temp. .... Dome Temp./Hum. -17.2E 62.3% Transparency Conditions Slightly hazy 150.

Focus 7.06

N FAN ON

Spectr. Temp. .... Dome Temp./Hum. Cx

422 0 50 1024 4 1 ccdfast.

Exp. Mtr.	Seeing	Plt. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5945	306µ	6400Å	29			
	3"	primary 6.1	primary A0	EEV CCD TV GUIDER		both stars		—	Seeing test EEV CCD	Dbl star from Jan 16	1994
		~~primary A0~~				above 304µ		—	pixel to arcsec scale determination	list.	
						STRADLING	306µ cass slit		"		
						"					
						"					
						"					
								1/2			
								5		~~End of this tonight~~	1.3K
3,100	3"	7.30 ~8.07	F6IV -G2IV	CASS CCD	1800 l/mm G=5945	306µ	6400Å	6	RX Cam	Telescope still East side	
								7		Cloud at end	
								1/2			
								8			
3320		7.29	dG2					9	std vel		6K
								10			

151
pg#4

sun/mon

Date 1996 Feb 4/5 Observers [Rm]/Tn/Smt

Emulsion Batches:

CCD Specs. Temp.
Focus 7.06
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc 389 32/41	FLATS x10					5 45 W	+42°	TUNG Hp 1/4	9s	FILTER	
42	COMP							FeAr clear	60		
43	HD103095	11 47 13	+38 26 10	02 07 55		0 49 E			790	15K	3"
44	COMP							"	60		
45	BIAS (4)			02 26					—		
CG80370 -73	HD103095 x 4	11 47 13	+38 26 10						.067		2"
74/75	" x 2					0 38 E	81° Alt		.133		
46	BIAS (4)			03 03					—		
47/48	INBOARD/OUTBOARD					0 0 2 W	+26°		55/60		

~~Spectr.~~ CCD Temp. -100.4°C   Dome Temp./Hum. -17.4°C 64.6% H   Transparency Conditions Some cloud
→ hazy but clear
→ some cirrus cloud

Focus 7.06   N FAN ON

Spectr. Temp.   Dome Temp./Hum. -17.7°C/66.7% @ seeing test.   422 0 50 1024 4 1 ccdfmt.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
13G 39 FILTER				CASS CCD	1800 l/mm G = 5445	306μ	6400Å	2		Telescope on E side of pier	1.2K
								11			
7.0K	3"	✓ 6.45	68 V p					12	std vel		12.5K
								13			
								1			
	2"	✓ 6.45	68 V p	EEV CCD TV GUIDER		above 3 dpm		—	seeing test	Dome E, Telescope on E side of piers, some cirrus cloud coming, full moon up very good seeing, middle of cold snap	
		"	"					—	"		
								1		tried to get Pallas and a std vel but clouds are just too thick.	
								3/4	focus test	-17.3°C - end of night.	

1991
153 Mon / Tues

Date 1996 Feb 5/6 Observers Kak / Tn / Smt

Emulsion Batches: ....

Spectr. Temp. ...
Focus ..... 7.1...
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CC 389 49/50	Inboard/outboard							FeAr clamp	40/78	[illegible]	
51	BIAS (4)			21 03							
52	comp										
53	HD 20902	3 17 11	+49 30 19	21 05 31		2 31			327s	[illegible]	
54	comp										
55	HD 20902	"	"	21 15 20		[illegible]			95	10..	
56	"	"	"	21 17 25		2 38 W			50	..K	
57	Comp										
58	Comp										
59	HD 62509	7 39 12	28 16 04	21 27 08		-1 37 E			70	..K	
60	"	"	"	21 30 21		-1 29 E			60	9.K	
61	"	"	"	21 31 13		-1 26 E			60	[illegible]	
62	Comp										
63	bias (4)			21 36							
64	Comp	[illegible]	[illegible]								
65	HD 54090 A	07 49 06	30 56 09	21 46 19		1 08 E			824	12..	2 3/4"

CCD Spectr. Temp. −101.0°C ..... Dome Temp./Hum. −12.2°C 60% H Transparency Conditions .. Part Clear 154

Focus ..... 7.12 ....

Spectr. Temp. .... Dome Temp./Hum. .... 422 0 50 1024 4 1 CCDFMT

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	~~Emulsion~~ CD	P.H.	Program	Remarks	Quality
	BG 39 Filter				CASS G=4508 1800 l/mm	1800 l/mm G=4508	306u	4340Å	3/4			
									1			
									5			840
39	6000		1.79	F5Ib					6	Sp Std-Tab		9.5K
									7			
95	10000		"	"					6	Sp Std-K0k		6.4K
50	16K		"	"					8	"		11.0K
									9			
									10			
70	36K		1.14	K0III					11	Sp Std-K0k		
60	37K		"	"					12	"		
	40K		"	"					13	"		
									14			
									1			
									15			
	1.2K	2"3"	B-9	G2IV					16	Sp Phot-K0k		

pg 155 #2

Mon / Tues

Date 1996 Feb. 5/6 Observers Kak / Jn / Smt

Emulsion Batches:

CCD Spectr. Temp. -1...

Focus ... 7.12...

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
~~cc38966~~ 66	Comp							FeAr Cl	60s	60 39 : 14	
cc38967	HD64090A	07 49 06	30 56 00	22 03 09	~~[illegible]~~	0 34E			1800	1760	2.3
cc38968	Comp							FeAr Clear	60s		
cc38969	HD64090A	"	"	22 36 05		0 03E			1805	2610	
70	Comp							"	60		
71	BIAS(4)										
72/80	FLATS x 9					0 10W	+30 37	Tung Clear	33		
cc38981/82	Inboard / outBoard					0 26W	"	FeAr Clear	~~[illegible]~~ 40/70	Hg 39 Filter Still	
83	BIAS(4)										
84	Comp							FeAr Clear	30s		
85	HD 748 74	8 41 29	+06 47 09	23 56 01		0 04'E			60	4500	
86	~~Comp~~ "	"	"	23 57 47				~~[illegible]~~	60s	1900	
87	"	"	"	23 59 44					110	1608	
88	Comp								30		
89/97	FLATS x 9					0 05W	+35°	Tung Clear	5s		
98	BIAS(4)										

CCD Spectr. Temp. -101.0°C ...... Dome Temp./Hum. -12.9°C 64% H Transparency Conditions ... Clear. new ...
Then sudden overcast

Focus ... 7.12 ...

Spectr. Temp. -102.0°C ...... Dome Temp./Hum. -13.3°C 66% H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality (ADU MAX)
BG 39 Filter 2700	2¾	B=7	G2 VI		1800 l/mm G=4508	306	4340Å	1 FCL 18	Sp 1.9m -160K	≈ 65/1 S/N	
								19			
2610		"	"					20			
								21			940
								1/2			
								2			13.8K
(BG 39 Filter still)		T=-13.3°C		~~F=7.20~~	F=7.24	306μ	4298Å	3/4	focus test	2 455 0 50 1024 4 1 CCD FMT	
				600 l/mm G=2683				1/2	format now	465 0 50 1024 4 1	
								5			
4500		3.98	G0 III					6			9.6K
3900		"	"					6			8K
5000		"	"					6			9.4K
								7			840
								22			13K
								1/2			

157
pg#1 Tues/Wed

Date 1996 Feb 6/7 Observers KOK / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc38999/39000	Inboard / outboard			18 56		0 07W	+46	FeAr Clear	40/70
cc39001	BIAS(4)								
02	Comp							"	60s
03	HD12929	2 01 32	22 59 23	19 04 48		1 49W			148
04	"	"	"	19 07 59		1 51W			138
05	"	"	"	19 11 11					
06	Comp							FeAr Clear	60s
07	"							"	"
08	HD48329	6 37 47	25 13 49	19 29 14					470
09	"	"	"	19 38 59					278
10	"	"	"	19 44 23					226
11	Comp							FeAr Clear	60s
12	Bias(4)			19 53					
13	Comp							"	60
14	HD28004	4 20 12	48 05 00	20 05 47		0 42W			936
15	Comp							"	60s

CCD ~~Spectr.~~ Temp. −101.2 °c Dome Temp./Hum. −8.9°C 59.2%H Transparency Conditions Part cloudy

Focus 7.05

Spectr. Temp. Dome Temp./Hum. −9.7°C 59.2%H 90c gain

C λ 422 0 50 1024 4 1 CCD FMT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG 39 Filter	T 9.0°C	F = 7.05		CASS CCD	1800 l/mm G-4480	30.6μ	~~4299Å~~	3/4	focus test		max ADU
							~~I .5 Å~~	1/2			
							~~4298Å~~	7			14K
13255	2"	B=3.15	K2 III				4302 ±.5	8	Std - Kok		~~9.6K~~
12935	"	"	4				~~Feb 10 Fn note~~	8	"		6.9K
13000								8	"		5.8K
								9			
		~~B=4.40 G8 Ib~~						10	~~Std Kok~~		
13020		B=4.40	G8 Ib					11	Std - Kok		3.6K
13058		"	"					12	"		5.3K
14000		"	"					13	"		
								14			
								15			
								16			
335	2"	B=8.3	G5 E					17	Pgm - Kok	too cloudy (30/1 S/N)	
								18			

159
p9#2 Tues/Wed

Date 1996 Feb 6/7 Observers Kok/To

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC39016	Comp			0				TeAr Clear	60	BG39 Filter	
17	HD 62345	9 38 25	24 38 16	20 33 25		2 2 E			1202	12600	2.3"
18	Comp							"	60		
19	HD 62345	"	"	20 56 34		1 33 E			1577	12600	<2"
20	Comp							"	60s		
21	HD 62345	"	"	21 25 50		0 58 E			1917	12750	2"
22	Comp							"	60s		
23	BIAS (4)			22 01							
24	Comp							"	60		
25	HD 20902	3 17 11	+49 30 19	22 10 24		3 56 W			964	15150	3"
26	Comp							"	60		
27	HD 20902	"	"	22 30 48					310	14800	
28	HD 20902	"	"	22 35 02		4 12 W			738	14500	
29	Comp							"	60		
30	Comp							"	60		
31	HD 62509	7 39 12	28 16 04	22 56 27					154	4100	

CCD Spectr. Temp.
Focus 7.0
Spectr. Temp.

~~Spectr.~~ CCD Temp. −101.2°C Dome Temp./Hum. −9.5°C 61.3% H Transparency Conditions medium thick cloud

Focus 7.05

Spectr. Temp. Dome Temp./Hum.

mAX ADU

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800 l/mm	306μ	~~4298Å~~	19	~~18~~		950 ADU
12600	2.3"	B=3.56 4.49	G8 III				4302Å	20	Pgn-Kdc		4K
								21			
12 600	<2"	4.43	"					22	"		4.5K
								23			
12,750	2"	"	"					24	"		5.5K
								25			
								1/2			
								26			1.1K
15,650	2"	2.27	F5 Ib					27	Kok std	Thick Cloud done last night @ 4340Å	8K
								26			
14800		"	"					27	"	clear now	7K
14,500		"	"					27	"		7K
								28			
17000		B=2.14	K0 III					29 30	Kok Std		5.5K

161
19 # 3 Tues / Wed

Date 1996 Feb 6/7 Observers Lok / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
cc39032	HD 62509	7 39 12	28 16 04	23 00 16	0 6 W				139
33	"	"	"	23 03 12	0 8 W				87
34	Comp							Fe Ar Clear	60
35	Bias(4)			23 07					
36	Comp							"	"
~~37~~	~~Comp~~								
37 ~~38~~	HD 110010	12 34 06	79 46 00	23 17 44	~~3 51 E~~	03 51 E			2382
38	comp							"	"
39	~~HD~~ Comp							"	60
40	HD 74874	8 41 29	06 47 09	00 17 23		0 33 W			766
41	"	"	"	00 30 46					300
42	"	"	"	00 36 03		0 43 W			274
43	Comp							"	60s
44	BIAS (4)			00 43					
45	Comp							"	60s
46	HD 110010	12 34 06	+79 46 00	01 07 58		2 26 E			1200
47	Comp							"	60

~~Spectr.~~ CCD Temp. -101.2C Dome Temp./Hum. -9.4C 60% Transparency Conditions Half cloudy 162

Focus 7.05

Spectr. Temp. Dome Temp./Hum. Clearing by 01 AM

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 Filter 18312		B=2.M	KoIII	CASS CCD	1800 l/mm G=1460	306µ	~~4298Å~~	31	Kok- Std		8.K
16345		"	"				4302 actually Feb 10/96	32	"		8.K
								33			
								1/2			
[illegible]00	2"	7.59	G0					10	Kok-Pgm	Too cloudy ≤ 50/1 S/N	
								14			
								15			
12,700	3"	3.98	G0III					16	Kok-Std	Cloudy	4.4K
12,300	2"-3"	"	"					16			4.7K
12,400		"	"					16			4.7K
								17			
	T = -100.2°C							1/2		Then Topup	
Rebalanced Exp meter (Had been falling)								19			1.1K
3000	2"-3"	7.59	G0					20	Kok pgm	Clear now Ex Dx 00 00 48 δδ 000012	1.4K 85:1 S/N
~~3,300~~								21			

pg 163 4 Tues / Wed

Emulsion Batches: ....

Date 1996. Feb. 6/7 Observers ....Kok / Tn..........

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC39048	HD110010	12 34 06	+79 46 00	01 25 53		2 5 E			1028
49	Comp							FeAr Clear	60
50/58	FLATS x 9					1 50E	+22°	TUNG Clear	33
59	BIAS(4)								
60-1	Inboard / out Board		Hartman			1 40E	+22°	FeAr Clear	40/70

Spectr. Temp.
Focus 7.05
Spectr. Temp.

Exp Mtr	Seeing
.00	
	— 8.6

Spectr. Temp. -10.2C   Dome Temp./Hum. -8.9C 73%   Transparency Conditions Cloudy

Focus 7.05

Spectr. Temp.   Dome Temp./Hum. -8.6°C 74.7%H

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
500		7.59	G0	CASS CCD	1800 ln/mm G=4483	306u	~~4298Å~~	22	Kod-pgm		
							4302Å	23			
							T4	~~2~~			
								1/2	Note Grating header Done		
	-8.6°C							28/29	wrong all night.		
								Note	Feb9. Central λ actually ≈ 4302Å		

165
pg#1 Fri/SAT

Date 1996. Feb. 9/10. Observers Ddy/Tn

Emulsion Batches:

CCD Temp.
Focus 6.97
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC390 62/63	Inboard/out board					0 10 W	+40°	FeAr Clear	40/70	[illegible]	
64	BIAS(4)			23 27							
65	Comp							"	60s		
66	HD 65301	7 52 58	59 ~~19~~ 08	00 05 57		1 22 W			476s	10.6K	4"
67	Comp							"	60s		
68	HD 65301	"	"	00 25 39		1 43 W			1071	10.7K	
69	Comp							"	60s		
70	HD65301	"	"	00 46 59		2 07 W			1221	12.3K	
71	Comp							"	60		
72	Bias(4)			01 12		~~[illegible]~~					
73	Comp							"	60s		
74	HD60335	7 28 54	+43 15 03	01 24 19		3 25 W			2107	[illegible]K	4"-6"
75	Comp							"	60s		
76	HD60335	"	"	02 02 31		3 38 W			598s	[illegible]	
77	Comp							"	60s		
78	Bias(4)										

Spectr. Temp. -101.0°C Dome Temp./Hum. -1.0°C 71.5% H Transparency Conditions Clearing mostly 166
Focus 6.97
Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CD	P.H.	Program	Remarks	Quality
BG 39 Filter				CH55CCD	1800l/mm G= 4475	306µ	43~~0~~51/f	3/4	focus		
							4301.5	1/2			
								5			
10.6K	4"	6.16	F2V					6	Dby pgm.		3.9K
								7			
10.7K		"	"					6	"		4.6K
								8			
10.8K		"	"					6	"		4.4K
								9			
								1/2			
								8			
7.6K	4"-6"	6.33	FO					10	Dby pgm		
								8			
687								10	"	Huge bank of clouds moving in!!	
								12			
								1/2			

167 pg #2 Fri/Sat.

Date 1996 Feb 9/10 Observers Dby / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC390 79/88	FLATS x10					0 0	+5°	TUNG Clear	33s

CCD ~~Spectr.~~ Temp.

Focus 6.9

Spectr. Temp.

Exp Mtr	Seeing
Alt	
Copied	

~~Spectr.~~ CCD. Temp. -100.3°C.... Dome Temp./Hum. -0.25°C/75.8% Transparency Conditions Cloudy .... 168..

Focus ....6.9.7..............

Spectr. Temp. .... Dome Temp./Hum. ....

ccdfmt 422 0 50 1024 # 1

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Clambda	P.H.	Program	Remarks	Quality
	33	BG 39 filter				CASS CCD	1800 l/mm G=4475	300 µ	4301.5Å	13			13k

More minor grating header edits to do.

Copied to Contour files3/detector/ccd/cass by FTP

16pg.1

Mon / Tues

Date 1996 Feb 12/13 Observers Dby / Tn

Emulsion Batches:

CCD Spectr. Temp.

Focus 7.15

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC39089	Bias(4)									BG39	
90	Comp							Fe-Ar clear	60s		
91	HD 60335	7 28 54	43 15 03	20 52 35		1 00 E			1800s	7.6K	7-10
92	Comp							"	60s		
93	HD60335	"	"	21 25 44		0 37 E			1160s	4.6K	
94	Comp								60s		
~~CC39105~~	~~BIAS(4)~~			~~21~~							
95/104	FLATS ×10					0 0	0°	Tung clear	33s		
CC39105	BIAS (4)			23 31							

CCD ~~Spectr.~~ Spectr. Temp. −101.3 °C Dome Temp./Hum. −12.6°C 49.3% H Transparency Conditions Clearing

Focus 7.15 No focus test possible tonight

Spectr. Temp. .... Dome Temp./Hum. .... 422 0.50 1024 4 1 CCDFINT

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
BG39 Filter				CASS CCD	1800l/mm G=4475	300μ	4301 Å ±0.3	1/2		4198 → 4405 Å traces.	
								3			
~~ES~~ 7.6K	7-10"	6.33	FO					4	Dby pym		
								5			
4.6K		"	"					6	"	It's snowing!	
								7			
								~~1/2~~		Dome T = −15.2°C	
								8			13.8K
								1/2			

pg 1 of 1

Date 1996 February 13/14 Observers [Bln]/Smt

Emulsion Batches:

Spectr. Temp.
Focus 7
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc39106/01	INBOARD/OUTBOARD					0	+43°	Fe Ar Clear	40/70	[illegible] 39 FILTR	
08	BIAS(4)			18 32					—		
09	COMP							"	60		
10	HD37017	05 30 25	-04 33 36	18 50 51		1 14 E			690	734	3'
11	COMP							"	60		
12	BIAS(4)			19 07					—		
13 → 21	FLAT x 9					1 11 E	-4° 30'		22		
22	BIAS(4)			0 41					—		
23/24	INBOARD/OUTBOARD					0	+15°	"	40/70		

Spectr. Temp. -100.1 °C Dome Temp./Hum. -8.3°C/58.4% Transparency Conditions a few clouds → increasing

Focus 7.05

FANS OFF

Spectr. Temp. .... Dome Temp./Hum. ....

422 0 50 1024 4 1 ccdfot

Comparison Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	P.H.	Program	Remarks	Quality
40/70	BG 39 FILTER				CASS CCD	1800 ℓ/mm G=4589	300µm	4461 Å	3/4	focus test	in focus now	
–									1			
60									5		Aborted an attempt of HD 214946 due to cloud & retr'n.	
40	734	3"	6.42	B2 V p					6	Bln Herich	thin cloud here now → very thick cloud, should clear some now	
60									7		cut short due to cloud, strong sky line, cosmic ray in spectrum	
–									1			
22									8		closed up.	9.7K → 10.9K
–									1		snow & cloud afterwards	
40/60									9/10	focus test	same temp in dome as 1st focus test.	

123 pg #1 of 3

Date 1996 February 14/15 Observers [Bln] / Smt

Emulsion Batches:

Spectr. Temp. ...

Focus ...

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
cc 39125/26	INBOARD/OUTBOARD					0^h	+45°	Fe Ar clear	40/70	[illegible]	
27	BIAS(4)								—		
28	COMP							"	60		
29	HD210459	22 05 33	+32 41 15	18 26 23		PLATFORM 5 42 W	+33° 10'		360	9.8K	4"
30	COMP							"	60		
31	COMP							"	60		
32	HD214946	22 36 42	+44 29	18 39 55		VERY CLOSE TO LIMIT 5 55 W			2200	[illegible]5K	3"
33	COMP							"	60		
34	BIAS(4)			19 22					—		
35	COMP							"	60		
36	HD223094	23 41 30	+28 09	19 25 37		5 19 W			1200	[illegible]K	3-4"
37	COMP							"	60		
38	COMP							"	"		
39	HD37017	5 30 25	-04 33 36	19 55 11		0 18 W			2265	[illegible]4K	3"
	~~COMP~~							~~"~~	~~60~~		
40-48	FLAT ~~x10~~ 9					0^h	+42°	Tung clear	22		

~~Spectr.~~ CCD Temp. -100.1°C Dome Temp./Hum. -5.3°C / 63.6% @ focus test Transparency Conditions clear with some clouds to far S?

Focus 7.01

N FAN ON

Spectr. Temp. .... Dome Temp./Hum. ....

422 0 50 1024 4 1 ccdfast.

Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
[illegible]	BG 39 FILTER				CASS CCD	1800 ℓ/mm G=4589	30μm	4461Å	3/4	focus test		
—								±1Å	1			
60									5			
360	9.8K	4" w/ [illegible]	B 4.75	F5III					6	Bln A shell	clock drive off for comp. sky still bright. ↓	40K
60									7		centred on 19th column.	
60									8			
2200	~6.5K	3"	B 7.26	A5					9	Bln SB2	centred on 19th column.	27K
60									10			
—									1			
60									11			
1100	2.3K	3"-4"	V 7.51	K3III					12	std vel	Pretty close in sky to previous 2 stars	700
60									13			
·									14			
2205	15.4K	3"	B 6.42	B2Vp					15	Bln He-rich	unable to get a 2nd comp. spectrograph controller died for a half hour.	
									~~15~~ 16			
[illegible]									16			

175
p9 #2 of 3

Date 1996 February 14/15 Observers [Bln] /Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc39149	BIAS(4)								
& 50/51	INBOARD/OUTBOARD					0^h	+42°	FeAr clear	40/70
52	BIAS(4)								—
53	COMP							"	60
54	HD37468AB	05 33 44	-02 39 28	22 16 04		2 01 W			200
55	COMP							"	60
56	HD37468D	"	"	22 23 43		2 43 W			2230
57	COMP							"	60
58	HD37468AB	"	"	23 08 11		2 53 W			180
59	COMP							"	60
60	BIAS(4)			23 18					—
61-69	FLAT x9					3 10 W	-3°	Tung clear	22
70	COMP							FeAr clear	60
71	HD 34759	05 14 44	+41 42 17	23 36 41		3 46 W			600
72	COMP							"	60

~~Spectr.~~ CCD Temp. -100.2°C Dome Temp./Hum. -8.4°C / 72.2% @ focus test Transparency Conditions clear, no moon. 176

Focus 7.04 now

N FAN ON

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	BG 39 FILTER				CASS CCD	1800 ℓ/mm G = 4589	306μm	4461Å	1		422 0 50 1024 4 1	
40/70	"				"	"	"	"	3/4	focus test	416 0 50 1024 4 1 (better centre) changed to 7.04 since T dropped.	
–									1			
60									5			
200	15.5K	4"	B 3.57	09.5V					6	Bln Dbl star	D on slit, too.	5.8K
60									7			
200	10.5K	5"!	B 6.3	B2V					8	Bln Dbl star	AB guided off slit, seeing got really bad, though → perhaps some contamination from AB spec contr. failed before comp.	4.4K
60									9			
180	11.5K	4"	B 3.57	09.5V					10	Bln Dbl star	D on slit, too.	5.3K
60									11			
~									1			~~[illegible]~~
22									13		Just making sure I got them.	11.5K → 11.[illegible]K
60									14			
600	14.6K	4"	V 5.09	B5V					15	Bln		7.0K
60									16			

pg 177 #3 of 3

Date 1996 February 14/15 Observers [Bln]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC39173	COMP							Fe Ar clear	60
74	HD66141	07 57 04	+02 36 34	23 55 11		1 22 W			490
75	COMP							"	60
76	BIAS (4)								—
CG80376-79	HD82582 x4	09 27 46	+47 20 45						.067
80/81	" x2	"	"		00 16	0 02 W	87° Alt		.133
CC39177	COMP							Fe Ar Clear	60
78	HD120315	13 43 36	+49 48 45	00 ~~23~~ 31 ~~53~~ 17		3 54 E			60
79	COMP							"	60
80	BIAS (4)			00 35					—
81/82	INBOARD/OUTBOARD					0 04 W	+10°	"	40/70

~~Spectr.~~ CCD Temp. -100.1°C Dome Temp./Hum. -9.2°C/75.4% (@ top of page & focus test, too.) Transparency Conditions a few thin clouds

Focus 7.04 N FAN ON

Spectr. Temp. Dome Temp./Hum. -9.3°C/75.7% @ seeing test 416 0 50 1024 4 1 ccdflat.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 l/mm G= 4589	306μ	4461 Å	17			
13.1 K		√ 4.39	K2IIIb F2-a5					18	~~[illegible]~~ Std Vel		
								19			
								1			
	3"	√ 6.52	F0V	EEV CCD TV GUIDER		above 306μ		–	seeing test	Dome NW, no wind, a few thick wisps of cloud, no moon, pretty good seeing.	
								–	"		
				CASS CCD	as before			20			
40 K	?	√ 1.86	B3V					21	Bln	trailed a bit, saturated 1st attempt	10.6K
								22			
								1			
								3/4	focus test	still in focus.	

pg / 179

Date 1996 February 15/16 Observers [Bln] / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc39183/84	INBOARD/OUTBOARD					0 07 W	+44°	Fe Ar clear	40/70
85	BIAS (4)			18 26					—
86	COMP							"	60
87	HD214946	22 36 42	+44 29	18 41 01		5 54 W			1800
88	COMP							"	60
89	BIAS (4)			19 13					—
90	COMP							"	60
91	HD3765	00 35 18	+39 40	19 20 31		4 24 W			1200
92	COMP							"	60
93	BIAS (4)			19 47					—
94	COMP							"	60
95	HD37017	05 30 25	-04 33 36	19 51 05		0 15 W			2080
96	COMP							"	60
97	BIAS (4)			20 32					—
98	COMP							"	60

CCD ~~Spectr.~~ Temp. -100.1°C   Dome Temp./Hum. -8.7°C / 52.1%   Transparency Conditions clear   180

Focus 7.02   FANS OFF

Spectr. Temp.   Dome Temp./Hum.   cd   416 0 50 1024 4 1 ccdfnt.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG 39 FILTER				CASS CCD	1800 ll/mm G=4589	304μ	4461 Å	3/4	focus test	T = 7.7°C set tiniest bit cool.	
							± 1 Å	1			
								5			
4685	4"-5" then worse.	B 7.26	A5					6	Bln SB2	Sky was a bit bright here too at start. S/N ~ 155:1	
								7			
								1			
								8			
2300	4"-5"	V 7.36	dK5					9	std vel	sort of close by. S/N ~ 85:1	1000
								10			
								1			
								11			
13.5K	4"-5"	B 6.42	B2IVp					12	Bln He rich	S/N ~ 280:1	5.5K
								13			
								1			
								14			

pg #2 [181]

Date 1996 February 15/16 Observers [Bln]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC39199	HD37022C	05 36 22	-05 27 20	20 35 46		0 37 W			730	16.1K	4.6"
CC39200	COMP							FeAr clear	60		
01	COMP							"	"		
02	HD37468AB	05 33 44	-02 39 28	20 56 02		0 45 W			220	18.5K	6"
03	COMP							"	60		
04	HD37468D	"	"	21 02 44		1 30 W			2510	2.6K	6"
05	COMP							"	60		
06	HD37468AB	"	"	21 48 05		1 37 W			215	17.7K	6"
07	COMP							"	60		
08	BIAS(4)			21 54					—		
09	COMP							"	60		
10	HD34759	05 14 44	+41 42 17	22 00 39		2 14 W			670	3K	
11	COMP							"	60		
CC80382-85	HD65583 x4	07 54 18	+29 31						.067		6"
86/87	" x2				22 32	0 04 E	75° Alt		.133		6"

~~Spectr.~~ CCD Temp. -100 °C Dome Temp./Hum. -10.4°C/54.6% Transparency Conditions clear 182

Focus 7.02 FANS OFF

Spectr. Temp. Dome Temp./Hum. -11.2°C/58.2% @ seeing test

416 0 50 1024 4 1 ccdfmt

Exp. Mtr. (BG 39 FILTER)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
16.1K	4-6"	B 5.15	O6ep(?)	CASS CCD	1800 l/mm G=4589	306μ	4461 Å	15	Bln O*	bright emission nebula b/g brightest * of trapezium θ¹Ori	6.4K
								16			
								17			
18.5K	6"	B 3.57	O9.5V					18	Bln	brightest of 3 close. D on slit, too. S/N ~ 320:1 (col 17)	8.2K
								19			
12.6K	6"	B 6.3	B2V					20	Bln	guided AB off slit, ∴ centred on col 38 S/N ~ 265:1	5.3K
								21			
17.7K	6"	B 3.57	O9.5V					22	Bln	centred on col 25 D on slit, too, on col 17	7.2K
								23			
								1			
								24			
16.3K		B 5.09	B5V					25	Bln		5.6K
								26			
	6"	V 7.00	dG7	EEV CCD TV GUIDER		above 306μ		—	seeing test	Dome SSW, light ~~wm~~ wind, clear, no Moon, T still dropping,	
								—	"	bad seeing	
										FIRE on HILLSVIEW probably affected seeing & transparency	

pg #3 183

Date 1996 February 15/16 Observers [Bln]/Smt

Emulsion Batches:

Spectr. Temp. ...

Focus ... 7.02

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cc39212	COMP							FeAr clear	60	½ 39 FILTER	
13	HD65583	07 54 18	+29 31	22 35 47		0 25 W			1530	5550	5"
14	COMP							"	60		
15	BIAS(4)			23 05					—		
16	COMP							"	60		
17	HD154528	17 00 54	+77 48	23 20 01		7 25 E			2830	4.0K	5"
18	COMP							"	60		
19	BIAS(4)			00 10					—		
20	COMP							"	60		
21	HD120315	13 43 36	+49 48 45	00 21 44		4 00 E			60	[illegible]K	?
22	COMP							"	60		
23	COMP							"	"		
24	HD138629	15 28 12	+41 14 19	00 36 32		5 22 E			900	[illegible]3K	7"?
25	COMP							"	60		
26	BIAS(4)			00 48					—		

~~Spectr.~~ CCD Temp. -100.3°C Dome Temp./Hum. -11.2°C/58.5% Transparency Conditions clear 1BK

Focus 7.02 FANS OFF

Spectr. Temp. .... Dome Temp./Hum. ....

416 0 50 1024 4 1 ccdfmt

Comparison Filter / Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60	BG 39 FILTER				CASS CCD	1800 ℓ/m G=4589	306μ	4461 Å	27			
1530	5550	5"	V 7.00	dG7					28	std vel		22K
60									29			
–									1			
60									5			
2830	14.0K	5"	V 6.66	A0					6	Bln SB2	SBIG ST-4 AUTOGUIDED	6.5K
60									7			
–									1			
60									8			
60	36K	?	V 1.86	B3V					9	Bln	trailed.	8.9K
60									10			
									11			
900	16.3K	7"?	B 5.09	A5V					12	Bln A-shell	spectrum spread out over columns, bad guiding/seeing.	5.0K
60									13			
–									1			

Pg 4 185

Date 1996 February 15/16 Observers [Bln]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC39227	COMP							FeAr clear	60
28	HD148283	16 21 50	+37 37 18	00 56 44		5 39 E			1500
29	COMP							"	60
30-38	FLAT x9					0 0	+16°	Tung clear	22
39	BIAS (4)								—
40/41	INBOARD/OUTBOARD					"	"	FeAr clear	40/70

Spectr. Temp.

Focus 7.0

Spectr. Temp.

Exp. Mtr.	Seeing
39 FILTER	
15.0K	6

~~Spectr.~~ CCD Temp. -100.5°C Dome Temp./Hum. -12.0°C/62.3% Transparency Conditions clear, no moon 186.

FANS OFF

Focus 7.02

Spectr. Temp. .... Dome Temp./Hum. ....

416 0 50 1024 4 1 ccdfast.

Comparison Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
60	BG 39 FILTER				CASS CCD	1800 l/mm G = 4589	306μ	4461 Å	14			
1500	15.0K	6"	✓ 5.52	A5V					15	Blu Asbell		5.2K
60									16			
22									2			
–									1			
40/70									3/4	focus test	should be set too warm, T dropped more than expected.	

page 1 187

Date Feb 16/17 1996 Observers Hal/Ri

Emulsion Batches:

Spectr. Temp. ..
Focus ...... 0.
Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
Ce10749/50	Inbound/outbound							no filter	/ / /		
51	Bias (9)										
52	comp							ThAr	1		
53	HD27561	4h 15m 54s	14° 11m 00	~~19~~ 19h 45m 37s	~~00~~ 00h 01	1h 09m W ~~00 52 W~~			900s	49	
54	comp							ThAr	1		
55	HD27561	"	"	20h 02 31		1h 39 W			1802s	23	
56	comp							ThAr	1 s		
57	Bias (4)			20h 34 38							
58	HD27561	"	"	20h 36:12		2h 14W			1800s	94	
59	comp							ThAr	1s		
60	HD27561	"	"	21 09:03		2h 46W			1800	18	
61	comp							ThAr	1 Sec		
62	Bias (4)			21:							
63	HD27561			21:45		3h 21W			1800s	09	
64	comp							ThAr	1s		

Spectr. Temp. -100° Dome Temp./Hum. -8.2°/52.9% Transparency Conditions Clear

Focus 0.2~~7~~11

Spectr. Temp. .... Dome Temp./Hum. ....

CCDFMT 00 256 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	~~P.H.~~ Ct	Program	Remarks	Quality
				CCD 18,13	.5685/300	60µA 400µH	6520 Å	1/2	Hnl	CCD FMT 00 128 1024 81	
								1/2		Had trouble focussing (late start)	
		~~6.61~~	~~F41V~~					3			
44		6.61	F41V					4		SIN ~90Ω vB ~~?~~37	
								~~8~~ 3			
123								5		SIN ~130	
								3			
								1/2			
94								4			
								~~5~~ 3			
118								5			
								3 c1			
								1/2			
109								4		SIN ~110	
								3			

184 page 2

Date Feb 16/17 Observers Hml/Ri

Emulsion Batches:

Spectr. Temp.
Focus
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
ce10765	HD27561	4h 15 54	14° 11 00	22:16:41		3h 54W			1800s (header says 1811)	101	
66	BIAS(4)			22:47:53							
67/68/69	comp							ThAr	1s		
70	HD27561	"	"	23:01:06		4h 28W			1200s (header says 1210)	46	
71	comp										
72	comp										
73	HD101606	11h 36 22	32° 17 59	23:36:38		2h 06 E			1800s	196	
74	Bias(4)			00:07:48							
75	comp								header says 1801		
76	HD101606			00:10:53		1h 32E			1800s	185	
77	comp							ThAr	1s		
78	HD101606			00:42:36		1h 0 E			1800	166	
79	comp							ThAr	1s		
ce10780	BIAS(4)										
81	HD101606			01:17		0h 25E			1800	221	
82	comp							ThAr	1s		

Spectr. Temp. -100° Dome Temp./Hum. -9.7/59.8 Transparency Conditions Clear 190

Focus 0.211

Spectr. Temp. Dome Temp./Hum.

CCDFMT 00 256 1024 41

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
101		6.61	F4V	18.13	~~[illegible]~~/300 .5685	60μH 400μH	6520 Å	5(i	Hα		
								½			
								~~[illegible]~~		GPIB ERROR (on 67/68), only header written correctly for 67/68	
46		"	"					2			
								3			
								~~4~~3			
196		5.73	F4V					4		S/N>160	
								½			
								3			
185								5		S/N>160	
								3			
166								6		S/N~150	
								3			
								½			
221								4		S/N<160	
								3			

page 3 191

Date Feb 16/17 Observers Hml/Ri

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
Ce10783	HD101606	11h 36m 22	32° 17 59	01:48:53	02:19	006W		Nack-sass → 1801	1800s	203	
84	comp							ThAr	1s		
85	Bias(4)			2:20:19							
86	HD101606	〃	〃	2:22:24		0 40 W			1800s	181	
87	comp							ThAr	1s		
88	HD101606			2:54:09		1 10 W			1691		
89	comp										
90	Bias(4)			3:23:46							
91/92	Inboard/Outboard										
794-803	10x Flats							Tung	1.7*		
804	comp							ThAr	1s		
805	HD101606	〃	〃	(4:13:16)	(4:14:05)	2 3[illegible] W			1800s	138	
806	comp										
807	HD101606			4:45:37		3 03 W			1800s	[illegible]	
808	comp							ThAr	1s		
809	Bias(4)			5:17 31							

Spectr. Temp.

Focus

Spectr. Temp.

Spectr. Temp. -100 Dome Temp./Hum. -10.4/66% Transparency Conditions Clear, Cirrus coming up from west 192

Focus

Spectr. Temp. Dome Temp./Hum. cloudedout.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	~~P.H.~~ C1	Program	Remarks	Quality
203		5.73	F4V	18.13	~~[illegible]~~/300 .5685	400um 60um	6550Å	9	Hml	S/N ~ ~~[illegible]~~ 135	
								3			
								1/2			
181								6		S/N ~ 135	
								3			
								4		Looks like only headers	
								1/2		written for CE10 492 & 93 Tu Feb 20	
								1/2		→ GPIB error writing dataset (only headers written properly — no image)	
								1/2	*(1,1,7s flats on t scale 100)		
								1		Clearing up a bit	
								2			
138								3		S/N ~ 140	
								2			
64								4			
								2			
								1/2		cloudedout	

193

Date 1996 Feb 18/19 (Sun/Mon) Observers [Hml] / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce108 10/11	Inboard / outBoard Hartmann					≈ 2 W	≈ +30°	ThAr clear	1/1
12	BIAS(4)			1815					
13	Comp							ThAr	1s
14	HD 27561	4 15 54	+14 11 00	18 33 33		0 18W			1800
15	comp							"	1s
16	HD27561	"	"	19 05 24		0 50W			1800
17	Comp							"	1s
18	HD27561	"	"	19 36 53		1 21W			1800
19	Comp							"	1s
20	BIAS(4)			2009					
21	BIAS(4)			2304		1 38W	−6°		
22/31	FLATS x10			23 10		"	"	Tung	2sec

CCD Spectr. Temp. −100.4° Dome Temp./Hum. −9.8°C 50% H Transparency Conditions Fine → suddenly cloudy

Focus 0.221 194

Spectr. Temp. Dome Temp./Hum. −10.5°C 60% H ADU → MAX

Comparison Filter	Exp	Exp. Mtr.	Seeing	Pl. Mag. ✓	Sp.	Inst. echelle	Grating/ × Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	1/1	no filter Voltage=1300				18.13°	0300 1.5685	60u = .277 set 400u = .225 set		1/2	focus test	CCD Fmt 0 0 128 1024 8 1	
									6520Å	1/2		CCD Fmt 0 0 256 1024 4 1	
	1s									3			
	[illegible]	640		5.61	F4 V					4	Hm l pgm		960
	1s	Exp meter now Balanced (It wasn't out much)								3			
	[illegible]	615	2.3"	"	"					4	"		
	1s									3			
	[illegible]	293		"	"					4	"		500
	1s									3			
										1/2			
	[illegible]							60u W 600u H = .205		2			14.3K

pg #1 KS

Date 1996 February 24/25 Observers KK / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE10832	COMP							ThAr	1
33	HD47105	06 31 56	+16 29 05	18 56 34		1 38 E			193
34	COMP							ThAr	1
35	HD47105			19 01 07		1 34 E			186
36	COMP							ThAr	1
37	BIAS(4)			19 08					—
38	BIAS(4)			19 09					—
39	COMP							ThAr	2
40	HD32147	04 55 51	-05 52 16	19 16 40		0 55 W			2400
41	COMP							ThAr	2
42	COMP							"	2
43	HD20902	03 17 11	+49 30 19	20 08 59		2 52 W			490
44	COMP							"	2
45	HD20902			20 19 22					479
46	COMP							"	2

CCD ~~Spectr.~~ Temp. –100.1°C Dome Temp./Hum. +3.4°C / 45.4% Transparency Conditions clear, very windy 1.96

Focus ~~[illegible]~~ .230

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	~~Grating~~/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Ar	1	no filter				ECHELLE 18.60	300 l/mm .5800	60μ W ~~[illegible]~~	6300 Å	3		0 0 128 1024 8 1	ccdflat.
	143	610	>5"	√ 1.93	A0IV			600μH (cops)		4	Std.	γ Gem. bad seeing	>10K
Ar	1									3			
	[illegible]	605								5	Std.		
Ar	1									3			
	–									1			
	–							60μ W 400μH		1		0 0 256 1024 4 1	ccdflat.
Ar	2									3			
	2400	75	YUCH	√ 6.21	K3V					4	KK		
Ar	2									3			
	2									3			
	[illegible]	1200	6"	√ 1.79	F5Ib					5	KK	very windy here, pointed into wind.	11.3K
	2									3			
	[illegible]	1205								6	KK	VERY windy.	15.4K
	2									3			

pg #2 197

Date 1996 February 24/25 Observers KK/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE10847	BIAS (4)			20 28					—
48	COMP							ThAr	2
49	HD8890	01 22 34	+88 46 26	20 39 51		4 32 W			444
50	COMP							"	2
51	HD8890			20 50 04		4 37 W			145
52	COMP							"	2
53	HD8890			20 54 02		4 40 W			83
54	COMP							"	2
55	HD8890			20 56 46		4 43 W			94
56	COMP							"	2
57	COMP							"	2
58	HD47105	06 31 56	+16 29 05	21 06 05		0 31 W			180
59	COMP							"	2
60	HD47105			21 10 30		0 35 W			160
61	COMP							"	2
62	HD47105			21 14 36		0 39 W			169

~~Spectr.~~ CCD Temp. -100.3°C Dome Temp./Hum. +3.5°C/43.1% Transparency Conditions clear 198

Focus .230

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	-					ECHELLE 18.60	300 ll/mm .5800	60mW 400μH	6300Å	1			
Ar	2									3			
	[illegible]	1200	5?	BSC 2.5	F8Ib					4	KK	saturated last order (reddest)	
	2									3			
	145	310								4	KK		
	2									3			
	198	315								4	KK		
	2									3			
	194	310								4	KK		
	2									3			
	2									3			
	[illegible]	615		✓ 1.93	A0IV					5	Std. KK		
	2									3			
	112	610								5			
	2									3			
	[illegible]	610								5			

pg#3 199

Date 1996 February 24/25 Observers Kk/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE10863	COMP							ThAr	2
64	COMP							"	2
65	HD61421	07 34 04	+05 28 53	21 22 52					27
66	COMP							"	2
67	HD61421			21 24 41		0 14 E			33
68	COMP							"	2
69	HD61421			21 26 43		0 12 E			23
70	COMP							"	2
71	COMP							"	2
72	HD 62509	0739 12	28 16 04	22 33 03					35
73	Comp							"	2
74	HD 62509			22 35 28					48
75	Comp							"	2
76	HD 62509			22 37 50	exp 84				8
77	HD 62509			22 38 38					19
78	HD 62509			22 39 25					11

Spectr. Temp. -1.00 Dome Temp./Hum. +3.8°C/43.1% Transparency Conditions Clear, high W winds 200

Focus 230

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2									3			
	2									3			
	22	300		V 0.34	BSC F5 IV ~~F8~~					4	kk		
	2									3			
	33	400		"	"					5	kk		
	2									3			
	33	365		"	"					6	kk		
	2									3			
	2												
	35	300		V 1.14	K0III b								
	2												
	48	403		"	"								
	2												
	8	75		"	"							Test for rv error vs S/N	
	19	175		"	"								
	11	75		"	"								

p4 201

Date 1996 Feb 24/25 Observers KK/Swt

Emulsion Batches:

Spectr. Temp.

Focus

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CE108 79	Comp							ThAr	2		
80	Comp			21 48				"	2		
81	HD 99028	11 18 43	11 04 49	21 48 58					276	75	6"
82	Comp							ThA	2		
83	HD 99028	11 18 43	11 04 49	21 56 01					211	75	
84	Comp ✗							ThA	2		
85	HD 99028	"	"	22 01 05					219	75	
86	Comp							ThA	2		
87	bias (4)								—		
88	comp							ThA	2		
89	HD103095	11 47 13	+38 26 10	22 14 09		3 06 E			1965	75	
90	COMP							ThAr	2		
91	HD103095			22 48 39		2 34 E			1820	75	5"
92	COMP							ThAr	2		
93	BIAS(4)			23 20					—		

CCD Spectr. Temp. -100 °C Dome Temp./Hum. +3.°3 / 46% Transparency Conditions clear 202

Focus .230

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccdfmt.

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
r	2											West wind	
	2												
	21[illegible]	75	6"	4.03	F2IV						KK		
A	2												
	211	75		(BSC 3.93)	F2IV						KK		
A	2												
	21[illegible]	75									KK		
A	2												
	–									1			
A	2									3			
	19.[illegible]	75		V 6.45	G8Vp					4	KK	IAU Std vel.	
Ar	2									3			
	[illegible]	75	5"	"	"					4	KK		
Ar	2									3			
	–									1			

pg #5 203

Date 1996 February 24/25 Observers KK/Smt

Emulsion Batches:

Spectr. Temp. ...
Focus ....
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE10894	COMP							ThAr	2
95	HD116656	13 19 54	+55 26 51	23 31 24		3 51 E			115
96	COMP							"	2
97	HD116656			23 36 09		3 40 E			485
98	COMP							"	2
99	HD116657	13 19 55	+55 26 39	23 46 54		3 26 E			694
CE10900	COMP							"	2
01	COMP							"	2
02	HD8890	01 22 34	+88 46 26	00 19 14		8 07 W			114
03	COMP							"	2
04	HD8890			00 22 44					62
05	COMP							"	2
06	HD8890			00 25 25		8 14 W			68
07	COMP							"	2
08	BIAS(4)			00 30					

Spectr. Temp. .... Dome Temp./Hum. +3.3°C/50.6% Transparency Conditions . Clear ....

Focus .... .230 ....

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccdflat

(C)omparison Filter / Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2					ECHELLE 18.60	300 l/mm .5800	60μW 400μH	6300 Å	3			
115	305		V 2.27	A1IVa+(Si)					4	KK	Mizar A, brighter & NW	
2									3			
[illegible]	1005		"	"					5	KK	Mizar A	
2									3			
[illegible]	423		V 3.95	A1m A7IV-V					6	KK	Mizar B, fainter & SE.	
2									3			
2									3			
[illegible]	400		BSC 2.5	F8Ib					5			
2									3			
[illegible]	300		"	"					5			
2									3			
[illegible]	300		"	·					6			
2												

pg #6 205

Date 1996 February 24/25 Observers KK/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CE10909	COMP							ThAr	2		
10	HD137909	15 23 42	+29 27 01	00 37 41		4 38 E			690	390	
11	COMP							ThAr	2		
12	HD137909			00 50 47		4 25 E			690	300	6"
13	COMP							"	2		
14	HD137909			01 03 59		4 13 E			635	135	
15	COMP							"	2		
16 - 25	FLAT x10					2 30 W	+13°	Tung	1		
26	BIAS(4)			01 32					—		
27/28	INBOARD/OUTBOARD					"	"	ThAr	2/2		

~~Spectr.~~ CCD Temp. -100.5°C Dome Temp./Hum. +3.3°C / 51.4% Transparency Conditions clear, still gusty

Focus .230

Spectr. Temp. Dome Temp./Hum. +3.0°C / 53.7% @ focus test. 0 0 256 1024 4 1 ccdfit.

Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	~~λ~~ Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
r	1					ECHELLE 18.60	300 ℓ/mm .5800	60μm W 400μm H	6300Å	3			
	690	320		V 3.60	F0p					4	KK	β Cor Bor	
v	2									3			
	690	300	6"	"	"					5	KK		
	2									3			
	635	335		"	"					5	KK		
	2									3			
g	1							60μm W 600μm H	for FLATS	2			7.7K
	–									1			
r	2/2							60μm W 400μm H		7/8	focus test	0 0 128 1024 8 1 ccdfit set a bit cool, ~~st~~ outband is too strong. 3/2 prob good.	

pg#1 207 Sun /mon

Emulsion Batches:

Date 1996 Feb 25/26 Observers [KH] / Tn / Smt

Spectr. Temp.

Focus .23

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce 109 29/30	Inboard / outboard					2 22 W	+8°	ThAr	3/2	no filter	
31	BIAS(4)			18 50					—		
32	COMP							ThAr	2		
33	HD22484	03 31 46	+00 05 04	18 53 16		1 36 W			985	350	3"
34	COMP							"	2		
35	COMP							"	2		
36	HD22468 A	03 31 39	+00 15 41	19 16 27		1 56 W			800	69	3"
37	COMP							"	2		
38	HD22468 B	"	"	19 31 45		2 39 W			2402	7	3"
39	COMP							"	2		
40	HD 22 468 A	"	"	20 14 18		2 55 W			826	57	
41	Comp							"	2		
42	BIAS(4)			20 30					—		
43	COMP							"	2		
44	HD20902	03 17 11	+49 30 19	20 35 55		3 17 W			125	[illegible]	

CCD ~~Spectr.~~ Temp. −99.9 °C Dome Temp./Hum. +4.0°C 42.3%H Transparency Conditions mostly clear

Focus .230

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Filter Exp	Exp. Mtr.	Seeing	V Mag.	Sp.	Inst.	× Grating/Tilt	Slit	c Lambda ~~Emulsion~~	P.H.	Program	Remarks (0 0 128 1024 8 1)	Quality
3/2	no filter				Echelle 18.60	0300 l/mm .5800	60μ W ... H	6300Å	7/8	focus test	T = 4.3°C, set a bit cool but T should drop below 0°	
–									1		0 0 256 1024 4 1 late start because CCD was warm	
2									3		exp meter balanced.	
985	350	3"	4.28	F9 IV-V					4	Std. Vel		5.2K
2									3			
2									3			
600	69	3"	5.78	G9 V					5	KK Vis Bin	brighter & SE well separated	1.2K
2									3			
	7	3"	8.73	K6 V					6	KK Vis Bin	fainter & NW well separated	500K
2									3		But some contamination by A for short time	
326	57		5.78	G9 V					5	KK Vis Bin	brighter one again	
2									3			
–									1			
2									3			
115	670		V 1.79	F5 Ib					4	KK		8.5K

Pg # 2 209 Sun/mon

Date 1996 February 25/26 Observers [KK] / Tn / Smt

Emulsion Batches:

Spectr. Temp. ...
Focus ...
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE10945	COMP							ThAr	2	[illegible]	
46	HD20902	03 17 4	+49 30 19	20 39 10	~~3 20 W~~	3 20 W			107	640	
47	COMP							"	2		
48	HD20902			20 42 25		3 24 W			115	530	5"
49	COMP							"	2		
50	Comp							"	2		
51	HD32147	4 55 51	-05 52 16	20 49 55		2 11 W			1100	53	4-5"
52	Comp							"	2		
53	HD32147	"	"	21 09 34		2 31 W			1100	54	
54	Comp							"	2		
55	BIAS(4)			21 30					–		
56	COMP							"	2		
57	HD50635 A	06 49 00	+13 18 18	21 35 55		0 48 W			150	55	4-5"
58	COMP							"	2		
59	HD50635 B	"	"	21 40 49		1 28 W			230	55	5-3"

~~Spectr.~~ CCD Temp. ..-100.6°C....... Dome Temp./Hum. +2.5°C/43.9% Transparency Conditions ....clear.................. 2/10...

Focus ....230...........

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccdfast

Comparison Filter	Exp	Exp. Mtr.	Seeing	✓ ~~Pg.~~ Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality MAX
r	2	no filter				ECHELLE 18.60	300 ll/mm .5800	60μ W 400μ H	6300 Å	3			40K
	107	640		1.79	F5Ib					4	KK		6.6K
	2									3			
	115	630	5"	"	"					4	KK		
	2									3			
	2									3			
	1100	53	4"-5"	6.21	K3V					5	+KK pgm		1.1K
	2									3			
	1100	54		"	"					5	KK		
	2									3			
										1			
	2									3			
	150	55	4"-5"	4.74	F0Vp					4	KK V is Bin	brighter and NW	760
	2									3			
	350	45	5"-3"	7.68	G6V					5	"	Fainter and SE seeing is getting worse.	790

pg # 3 2/11 sun/mon

Date 1996 February 25/26 Observers [KK]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CE10960	COMP							ThAr	2		
61	HD50635 A	06 49 00	+13 18 18	22 21 00		1 33 W			203	60	3"4"
62	COMP							"	2		
63	BIAS(4)			2226							
64	Comp							"	2		
65	HD 56986A	7 14 09	22 10 00	22 29 59		1 14W			61	75	4"
66	comp							"	2		
67	HD 56986 B	"	"	22 33 14		1 54W			2210	30	3"-6"
68	Comp							"	2		
69	HD 56986A			23 12 02		1 57 W			68	68	
70	Comp							"	2		
71	Comp							"	2		
72	HD68257AB	8 06 29	+17 56 58	23 17 33		1 17W			463	130	4.5"
73	Comp							"	2		
74	HD 68255 C	8 06 29	17 56 58	23 27 12		1 40 W			1259	15	4"
75	Comp							"	2		

~~Spectr.~~ CCD Temp. -100 °C Dome Temp./Hum. +2.3°C / 43.4% Transparency Conditions a bit of cloud to S 212

Focus .230

Spectr. Temp. Dome Temp./Hum. +1.1°C / 46.9%H

0 0 256 1024 4 1 ccdfmt.

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
Ar	2	no filter				ECHELLE 18.60	300 l/mm .5800	60μW 400μH	6300Å	3			
	20	60	3"-4"	4.74	F0Vp					4			850
	2									3			
										1/2			
	2									3			
	61	75	4"	3.55	F0IV					2			1.1K
	2									3			
	28	30	3"-5"	8.18	K3V					6		poor seeing at end ∴ cut exp. Fairly well separated	680
	2									3			
	68	68		3.55	F0IV					2			1K
	2									3			
	2									3			
	43	130	4-5"	5.05	F8/G0V?					4			1.7K
	2									3			
	125	125	4"	6.02	dG2					5			1.6K
	2									3			

pg#4 213 Sun/mon

Date 1996 Feb. 25/26.... Observers [KK]/Tn./Smt..........

Emulsion Batches:

Spectr. Temp. [illegible]

Focus 230

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE10976	HD68257AB	8 0629	+175658	234945		1 50 W			508	36	4.5
77	Comp							ThAr	2s		
78	BIAS(4)			00 00					–		
79	Comp							ThAr	2s		
80	HD62509	7 3912	+281604	000451		2 24 W			49	415	
81	"	"	"	000647		2 26 W			69	470	
82	"	"	"	00 0830		2 28 W			66	560	
83	COMP							ThAr	2		
84	Comp							"	"		
85	HD79210	9 07 42	+530700	00 1608		1 36 W			1800	58	4"
86	Comp							"	2		
87	HD79211	9 07 42	+53 07	00 49 46		2 24 W			2670	55	5"
88	COMP							"	2		
89	HD79210	9 07 42	+53 07	01 36 08		3 07 W			2425	57	5"
90	Comp							"	2		
91	BIAS(4)			02 20					–		

CCD ~~Spectr.~~ Temp. −101.8°C Dome Temp./Hum. +1.0°C / 48.5%H Transparency Conditions Fine 214

Focus :230

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccdflat.

Exp. Mtr.	Seeing	~~Pg.~~ ✓ Mag.	Sp.	CCD Inst.	Grating/ ~~X~~ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no filter 126	4"–5"	505	F8 +G0V	Echelle 18.60	D 300 l/mm 15800	60μ Width 400μ H	6300Å	4	KK Vis Bin		
								3			
								1/2			
								3			
475		1.14	K0IIIb					2	KK Std		6.6K
470		"	"					2	"		
560		"	"					2	"		
								~~3~~ 3			
58	4"	7.64	M0V					5	KK Vis Bin	sl. brighter and W ~~[illegible]~~	1.5K
								3			↑
55	5"	7.74	M0V					6	"	sl. fainter and E telescope got stuck on small step	Same strength
								3		for a minute or so.	
47	5"	7.64	M0V					5	"	sl. brighter and W again.	
								3		Seeing must be bad.	
								1/2			

pg #5 215

Date 1996 February 25/26 Observers [Kk] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE10992	COMP							Th Ar	2
93	HD66751	07 59 54	+70 00 00	02 25 40		4 36 W			931
94	COMP							"	2
95	HD66751	"	"	02 42 29		4 54 W			1000
96	comp							"	2
97	comp							"	2
98	HD8890	1 22 34	88 46 26	03 08 25		10 57 W			120
99	comp							"	2
ce11000	HD8890			03 11 52					141
01	comp							"	2
02	HD8890			03 15 39		11 06 W			118
03	comp							"	2
04	COMP							"	"
05	HD99028	11 18 43	+11 04 49	03 23 44		2 15 W			600
06	COMP							"	2
07	HD99028			03 35 19		2 26 W			600

~~Spectr.~~ CCD Temp. −101.6°C Dome Temp./Hum. +0.2°C/50.1% Transparency Conditions a few clouds, thin [illegible]

216

Focus .230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1 ccdfrst.

Comparison Exc	Exp. Mtr.	Seeing	V ~~Pg.~~ Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
2	no filter				ECHELLE 18.60	300 ℓ/mm .5800	60μ W 400μ H	6300Å	3			max ADU
93	60	5"	6.48	dF8					2	KK	Telescope East side [illegible]	970
2									3			
100	60		"	"					2			
2									3			
2									3			
120	520		2.5	F8Ib					4	KK	Δα −00 12 20 Δδ +0 0 24 Reversed ever so slightly.	5.3K
2									3			
14	600	4"							4	KK		
2									3			
118	500								4	KK		
2									3			
									3			
600	~~3000~~ 280	5"	4.03	F2IV					5	KK	i Leo.	3K
2									3			
600	307		"	"					5	KK	more counts, less signal.	2.9K

pg #6 217

Date 1996 February 25/26 Observers [KK] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CE11008	COMP							ThAr	2		
09	BIAS (4)			03 53					—		
10	COMP							"	2		
11	HD120476 A	13 44 36	+27 29	04 03 26		0 49 W			1800	39	3-4"
12	COMP							"	2		
13	HD120476 B	"	"	04 35 03		1 19 W			1697	19	3-4"
14/15	Comp x 2							"	2		
16	HD120476 A	"	"	05 31 07		2 17 W			1800	17	3-4"
17	Comp							"	2		
18	BIAS (4)								—		
19	COMP							"	2		
20	HD137909	15 23 42	+29 27 01	06 06 57		0 50 W			361	300	5"
21	COMP							"	2		
22	HD137909			06 14 15		0 58 W			363	300	
23	COMP							"	2		
24	HD137909			06 21 28		1 04 W			340	[illegible]	

Spectr. Temp. .... Dome Temp./Hum. -0.6°C./57.5% Transparency Conditions. Some thin cloud @ 0° and S of there. 2/8

Focus ......230............

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccdflat

Comparison Filter	Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	2					ECHELLE 18.60	300 l/mm .5800	60μ W 900μ L	6300 Å	3		w/its 2nd attempt. GPIB error prevented 1st attempt so I take another comp to be safe.	
	–									1			
	2									3			
	180	39	3"-4"	7.59	dKb					4	kk Vis Bin	V sl. brighter and NNW separated	860
	2									3			
	1697	19	3"-4"	8.03	N/A					5	"	V sl. ~~weaker~~ fainter and SSE CCD started warming > -90°C	
	2									3	LN_2	TOPPED UP AFTER THIS COMP	
	180	17	3"-4"	7.59	dKb					4	"		
	2									3			
	–									1/2			
	2									3			
	[illegible]	300	5"	3.66	F0p					2	kK	β Cor Bor sky getting a bit bright now.	24K
	2									3			
	305	300		"	"					2	kK		
	2									3			
	310	306		"	"					2	kK		

pg#7 219

Date 1996 February 25/26 Observers [KK] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE11025	COMP							ThAr	2
26/35	FLAT x 10					1 10 W	+30°	Tung	1
36	BIAS (4)								—
37/38	INBOARD/OUTBOARD					"	"	ThAr	3/2

Spectr. Temp.

Focus

Spectr. Temp.

Exp. Mtr	Seeing

~~Spectr.~~ CCD Temp. -100.6°C Dome Temp./Hum. -1.6°C/73.1% Transparency Conditions thin cloud mostly S DAWN.

220

Focus .230

Spectr. Temp. .... Dome Temp./Hum. -1.4°C

0 0 256 1024 4 1 ccdfnt

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	~~Grating/~~ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				ECHELLE 18.60	300 l/mm .5800	60μW 400μH	6300 Å	3			[illegible]
						60μW 600μH		3			73K
								1			
						60μW 400μH		7/8	focus test	0 0 125 1024 8 1 ccd fnt	

pg #1 221 Mon / Tues

Date .1996.Feb.26/27. Observers .[KK]/.Tn./.Smt......

Emulsion Batches:
....
....
....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE110 39/40	Inboard/outBoard	Hartmann						ThAr	3/2s
CE11041	BIAS(4)			18 35					
42	COMP							ThAr	2s
43	HD8890	1 22 34	+88 46 26	18 45 28		2 38 W			150
44	Comp							"	2
45	HD8890	"	"	18 49 55					136
46	comp							"	2
47	HD8890	"	"	18 53 57		2 48 W			134
48	COMP							"	2
49	COMP							"	2
50	HD4614A	00 43 03	+57 17 06	19 10 24		4 30 W			60
51	COMP							"	2
52	HD4614B			19 13 11		5 13 W			2430
53	COMP							"	2
54	HD4614A			19 56 14		5 16 W			60
55	COMP							"	2

Spectr. (CCD) Temp. −100.2°C Dome Temp./Hum. +3.0°C / 60% H Transparency Conditions Fine

Focus :230

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2/2					Echelle 18-60	0300 l/mm .5800	60μ W=.277 400μ H	6300Å	7/8	focus	0 0 ~~1024~~ 128 1024 8 1	
									1/2		0 0 256 1024 4 1	
2									3		telescope on E side of piers	
150	320		2.5	F8Ib					4	KK	Δα −00 14 22 Δδ +00 02 39	
2	~~37~~								3			
136	375								4	KK		
2									3			
134	300								4	KK		
2									3			
2									3		telescope still on E side	
60	62	4"	3.45	G0V					5	Kk Vis Bin		1.8K
2									3			
2150	55	3"	7.51	K7V					6	"	spectral type difference in colour really noticeable.	2.0K blue and [illegible] red conditions
2									3			
60	83	3"	3.45	G0V					5	"	better focus this time	
2									3			

pg # 2 223

Date 1996 February 26/27 Observers [KK]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE11056	BIAS(4)			19 59					—
57	COMP							ThAr	2
58	HD17332 A	02 41 48	+18 59	20 12 18		3 53 W			1200
59	COMP							"	2
60	HD17332 B	"	"	20 34 25		4 22 W			1634
61	COMP							"	2
62	HD17332 A			21 03 21		5 00 W			2206
63	COMP							"	2
64	BIAS(4)			21 42					—
65	COMP							"	2
66	HD20902	03 17 11	+49 30 19	21 49 33		4 36 W			90
67	COMP							"	2
68	HD20902			21 52 56		4 38 W			94
69	COMP							"	2
70	HD20902			21 56 39		4 42 W			90
71	COMP							"	2

Spectr. Temp. .... Dome Temp./Hum. +0.5°c / 62.2%H Transparency Conditions . Slightly hazy ....

To increasingly cloudy

Focus ....: 230 ....

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccdflat

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD ~~Inst.~~	X ~~Grating/ Tilt~~	Slit	~~Emulsion~~ cd	P.H.	Program	Remarks	Quality
	–					ECHELLE 18.60	300 ℓ/mm .5800	60μW 400μH	6300Å	1/2			max ADU
…r	2									3		telescope still on E side	
	1200	34	4"	7.40	dF9					4	KK Vis Bin	sl brighter and SE	570
	2									3			
	1500	18	4"–3"	8.20	N/A					2	"	sl. fainter and NW cloud at end	390
	2									3			
	2200	30		7.40	dF9					4	"	sl. brighter and SE strongest at 3	700
	2									3		obviously.	
	–									1			
	2									3		telescope still E side of p.a.	
	90	620	3"	1.79	F5Ib					6	KK		7.5K
	2									3			
	94	740		"	"					6	KK		9.3K
	2									3			
	90	600		"	"					6	KK		8.6K
	2									3			

pg #3 225

Date 1996 February 26/27 Observers [KK] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11072	COMP							ThAr	2
73	HD59438A	07 24 49	-14 47 08	22 10 34		W			769
74	COMP							"	2
75	HD59438B	"	"	22 24 39		1 15 W			581
76	Comp							"	2
77	HD59438B	"	"	22 38 37		1 20 W			161
78	COMP							"	2
79	BIAS (4)			22 42					—
80	COMP							"	2
81	HD66751	07 59 54	+70 00 00	22 49 14		~1ʰ W			447
82	COMP							"	2
83	Comp							"	2
84	HD137909	15 23 42	+29 27 01	23 05 07		E			733
85	Comp							"	2
86/95	FLATS x 10			23 36		2 18W		Tung	1
96	BIAS(4)			23 44					

Exp Mtr.	Seeing
26	3-4"
0	4"
	?
15	3-4"
130	4-5"

Spectr. Temp. ...
Focus ... .23
Spectr. Temp. ...

Spectr. Temp. .... Dome Temp./Hum. -0.5°C/68.4% Transparency Conditions hazy, cloud to the far S. → mostly cloudy. 226

Focus .230

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. -0.3°C 66.3% H

0 0 256 1024 4 1 ccdflat

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	2	no Filter				ECHELLE 18.60	300ℓ/mm .5800	60μW 400μH	6300 Å	3		telescope still on E side	
	7.69	26	3"-4"	6.40	FTV					4	KK Vis Bin	sl. brighter and S, not really "Vis" Bin, guiding on S half of fuzzy light patch.	500
	2									3			
	5.81	0	4"	7.50	N/A	But looks "K"				5	"	cut short - useless. Some cloud, poorly or not resolved.	
	2									3			
	[illegible]		?	6.40	FTV					4	"	cleared during comp beforehand. cloud again	
	2									3			
	–									1			
	2									3		telescope still on E side.	
	4.57	15	3"-4"	6.48	dF8					6	KK	clear here for now	450
	2									3			
	2									3			
	7.33	130	4"-5"	3.66	F0p					2			~2.4K
	2									3			
	1.19							[600μH for Flats only]		1, 1/2			6.9K

pg#4 227 Mon/Tues

Date 1996 Feb. 26/27. Observers [KK]/Tn/Smt........

Emulsion Batches:

Spectr. Temp. ...

Focus ...1230

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
~~cell097~~	~~Comp~~ (Lost)							ThAr	2s		
cell0 97	HD 99028	11 18 43	+11 0449	00 0917		0 54 E			700	166	3-4"
98	Comp							"	2s		
99	HD99028	"	"	00 2225		0 29 E			1452	190	4-5"
cell100	Comp							"	2s		
01	HD99028	"	"	00 4803		0 22 E			353	180	3-4"
02	Comp							"	2s		
03	BIAS(4)			00 58							
04	Comp							"	2		
05	HD 89484	10 14 28	20 20 51	00 5920		0 50W			157	300	3-4"
06	Comp							"	2		
07	HD 89485	10 14 28	20 20 49	01 03 24		0 57W			321	370	3"
08	Comp							"	2		
09	HD 89484	10 14 28	+20 2051	01 1012		1 01 W			167	420	
10	Comp								2		

Spectr. Temp. .... Dome Temp./Hum. -00.2°C 66.8% Transparency Conditions ..Mostly cloudy → clear

Focus ..1230..................

Spectr. Temp. .... Dome Temp./Hum. .... Topup complete by 00:05

Companion Filter / Exp.	Exp. Mtr.	Seeing	Ph. Mag.	Sp.	CCD Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2	no filter				Echelle 18.60°	0300 l/mm .5800	60μ W 400μ H	6300Å	3			max ADU
700	166	3"-4"	4.03	F2IV					2	K K pym		2.5K
2									3			
152	190	4"-5"	"	"					2			2.6K
2									3			
353	180	3"-4"	"	"					2			
2									3			
									1/2			
2									3			
157	300	3"-4"	2.22	K1 III					4		Brighter of pair good separation	5.2K
2									3			
334	370	3"	3.47	G7 III					5			5.2K
2									3			
167	420		2.22	K1 III					4			10K
2									3			

pg #5 229

Date 1996 February 26/27 Observers [KK]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE11111	COMP							ThAr	2
12	HD131156A	14 46 46	+19 30 57	01 21 28		3 05 E			960
13	COMP							"	2
14	HD131156B			01 39 26		2 19 E			2654
15	Comp							"	2
16	HD131156A			02 25 09		2 06 E			1064
17	Comp							"	2
18	BIAS(4)			02 46					—
19	COMP							"	2
20	HD146361	16 10 56	+34 06 42	02 51 32		3 05 E			645
21	COMP							"	2
22	HD 146362	"	"	03 04 21		2 29 E			1963
23	COMP							"	2
24	HD146361	"	"	03 39 02		2 12 E			893
25	Comp								2
26	BIAS(4)			03 55					—

Spectr. Temp. ...
Focus ...23
Spectr. Temp. ...

Exp Mtr	Seeing
360	4"
87	3-4"
180	
80	3-4"
186	3"
83	4"

Spectr. Temp. .... Dome Temp./Hum. -0.8°C / 66.8% Transparency Conditions clear again 230

Focus .230

Spectr. Temp. .... Dome Temp./Hum. -1.3°C / 71.8%H

0 0 256 1024 4 1 cd bh

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	(C) Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	2					ECHELLE 18.60	300 l/mm .5800	60μW 400μH	6300 Å	3			
	960	300	4"	4.74	G8V					4	KKVis Bin	bright one, well separated - FAR TOO STRONG FOR B	4.7K
	2									3			
	2064	87	3"-4"	6.90	K5V					5	"	faint one, well separated.	2.4K
	2									3			
	1064	250		4.74	G8V					4	"	a bit of cloud.	
	2									3			
	–									1/2			
	2									3			
	165	80	3"-4"	5.58	G0V					6	"	ADS 4979 A, brighter NE	1.2K
	2	est ± 5	~~3"-4"~~	~~5.58~~	~~G0V~~					3			
	1933	≃ 86	3"	6.59	G1V					2	"		1.7K
	2			~~6.59~~	~~G1V~~					3			
	1883	83	4"	5.58	G0V					6	"		
	2									3			
	–									1/2			

pg #6 231

Date 1996 February 26/27 Observers [KK]/Tn/Smt

Emulsion Batches:

Spectr. Temp. ..
Focus 23
Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CE11127	COMP							ThAr	2		
28	HD138918	15 30 01	+10 52 23	04 00 29		1 21 E			245	118	3"
29	COMP							"	2		
30	HD138917	15 30 01	+10 52 19	04 06 43		1 07 E			731	115	3"
31	COMP							"	2		
32	HD138918	15 30 01	+10 52 23	04 20 11		0 59 E			410		4"
33	COMP							"	2		
34	COMP							"	"		
35	HD8890	01 22 34	+88 46 26	04 34 30		12 27 W			239	136	4"
36	COMP							"	2		
37	HD8890	"	"	04 40 11		12 37 W			512	10	NA
38	COMP							"	2		
39	HD8890	"	"	04 50 11		12 45 W			384	1	"
40	COMP							"	2		
41	BIAS(4)			04 59					—		
42/43	INBOARD/OUTBOARD					2 04 W	+17°	ThAr	3/2		

Spectr. Temp. .... Dome Temp./Hum. -1.4°C / 75.5% Transparency Conditions half clear, half cloud... 232
→ cloud.

Focus .230

Spectr. Temp. .... Dome Temp./Hum. -1.6°C / 81.1% @ focus test.

0 0 256 1024 4 1

Comparison Filter / Exp	Exp. Mtr.	Seeing	~~Plt.~~ Mag.	Sp.	CCD ~~Inst.~~	~~Grating/~~ Tilt	Slit	~~Emulsion~~ CCD	P.H.	Program	Remarks	Quality
2					ECHELLE 18.60	300 l/mm .5800	60μ W 400μ H	6300Å	3			
245	118	3"	4.20	F0 IV					4	KK Vis Bin	ADS 9701 A, brighter Now, well separated.	1.5K
2									3			
231	105	3"	5.20	dF0					5	"	ADS 9701 B; fainter and S well-separated.	
2									3			
410	111	4"	4.20	F0 IV					4	"	ADS 9701 A again cloud at end.	
2									3			
"									3		telescope on E side of pier.	
284	136	4"+	2.5	F8 Ib					6	KK	cloudy all over sky. a few holes here	
2									3			
312	10	N/A	"	"					6	KK	thick cloud, hardly visible with intensifier.	
2									3			
384	1	"	"	"					6	KK	a hole? sucked in, only there for a sec.	
2									3			
–									1			
8/2									7/8	focus test	end of night.	

pg#1 *note 233 cc 392 43-44 perhaps undocumented Daytime tests.

Date 1996 Feb. 28/29. Wed/Thurs Observers [Bln]/Ta/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
* cc 392 45/46	Inboard/Outboard Hartmann					0 0	+41°	Fe-Ar Clear	40/50
47	BIAS (4)			03 39					—
48	COMP							"	60
49	HD120315	13 43 36	+49 48 45	03 43 49		0 14W			110
50	COMP							"	60
51	comp							"	60
52	HD138629	15 28 12	+41 14 19	03 54 01		1 01 E			1200
53	Comp							"	60
54	BIAS (4)			04 18					—
55	COMP							"	60
56	HD148283	16 21 56	+37 37 18	04 23 23		1 14 E			1916
57	comp							"	60
58	Comp							"	60
59	HD136202	15 14 12	+02 08 37	05 05 38		0 17 W			839
60	comp							"	60
61	BIAS (4)			05 22					

CCD Spectr. Temp. [illegible]
Focus 7.06
Spectr. Temp.

Exp. Mtr.	Seeing
[illegible]	
30.0K	15"
[illegible]K	10"+
[illegible]2K	12"
[illegible]K	10"

CCD Spectr. Temp. −100.2°C Dome Temp./Hum. −10.0°C 55% H Transparency Conditions Clearing by 2:30 horrendous seeing. 234

Focus 7.06

Spectr. Temp. Dome Temp./Hum. −12.7°C 57% H c d

412 0 50 1024 4 1 CCDFAST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 filter				CASSCCD	1800l/mm GF4589	306μ	4464Å	3/4	focus test	set cool but spec T should drop a lot.	max ADU
							± .5Å	1			
								5			
30.0K	15"	V 1.86	B3V					6	Bln	η UMa centred low	8.6K
								7			3.1K
								8			
15.4K	10"+	B 5.09	A5V		S/N ~ 305:1			9	Bln Shell	seeing is still awful. centred on col 27	4.0K
								10			
								1			
								11			
15.2K	12"	V 5.52	A5V		S/N > 300:1			12	Bln Shell		3.5K
								13			
								14			
10.6K	10"	V 5.06	F8 ~~IV~~ V		S/N > 240:1			15	Std vel		3.5K
								16			3.0K
								1/2			

pg#2 236 Wed / Thurs

Emulsion Batches:

Date 1996. Feb 28/29 Observers [Bln] / Tn / Smt

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp Mtr	Seeing
CC39262	Comp							FeAr Clear	60s	B639 filter	
63	HD 152614	16 49 17	+10 19 48	05 27 01		1 02 E			490	14.8K	7"
64	comp							"	60s		
65	COMP							"	60		
66	HD 158352	17 23 44	+00 24 42	05 41 29		1 06 E			1491	45K	5-10
67	Comp							"	60		
68	COMP							"	60		
69	HD164852	17 58 07	+20 50 00	06 12 12	~	1 20 E			691	19K	6
70	COMP							"	60		
71	BIAS (4)								—		
72/80	FLATS x 9					~1h E	+20°	TUNG Clear	13		
81/82	INBOARD / OUTBOARD					"	"	FeAr Clear	40/50		
			1996 Feb 29 / MAR 1st								
CC 39283/84	Inboard / OUTBOARD	Hartmann 1846						FeAr Clear		-61°C	F: 6

Spectr. Temp.

Focus 7.0

Spectr. Temp.

Spectr. Temp. .... Dome Temp./Hum. -13.2°C 58.5%H Transparency Conditions mostly clear 236
Focus ..... 7.06 ....
Spectr. Temp. .... Dome Temp./Hum. -13.9°C / 58.9%H @focus test. 412 0 50 1024 4 1

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 Filter				CASSCCD	1800 l/mm G=4589	306μ	4464Å	17			3.0K
14.8K	7"	B 4.30	B8V					18	dbl line	SB Bln	
								19			
								20			
14.5K	~~5"~~ 10"	B 5.66	A8V					21	A shell Bln		3.7K
								22			
								23			
10.9K	6	B 5.19	B3IV					24	Bln SB4	sky starting to get bright.	
								25			
								|			
								26			
								~~27~~ 27/28	focus test	right in focus	
T=-6.1°C F=6.93				CASS CCD	1800 l/mm G5950	306μ	6399Å	3/4	focus test for Feb 29/Mar 1 But no observing after all.		

237
pg #1 ~~Thuc 4E~~: FTI/SAT

Date 1996 ~~Feb~~/MAR 1/2 Observers [Btr] / Tn. ~~L~~ (Vys Hα ~~pgm~~)

Emulsion Batches:
For Comp and FLAT
GG385 Filter

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC392 85/86	Inboard/Outboard Hartmann			18 48				FeAr Clear	40/40
87	BIAS(4)			18 52.					
88	Comp								40s
89	HD 34029	05 09 18	+45 54	19 04 52		0 12 W			16s
90	Comp							FeAr Clear	40s
91	Comp							"	40
92	HD 36395	05 26 18	-3 41 00	19 15 25		0 14 W			425
93	Comp							"	40s
94	Comp							"	40
95	AC+54 231-89	03 33 54	+54 53 34	19 31 45		2 30 W			988
96	Comp							"	40s
CC39300	BIAS(4)	Done Later.		20 25					
CG 80388/91	~~Comp~~ HD 52860	[6 57 39]	+7 55 21					4x	67ms
CG80 92/93	HD 52860					0 37 E		2x	133 ms
CC39297	Comp								
98	HD 87901	10 03 03	+12 27 22	20 19 36		3 26 E			24
99	Comp							FeAr Clear	40

CCD Spectr. Temp. -101.0°C Dome Temp./Hum. -4.2°C 56%H Transparency Conditions Hazy - increasing cloud.

Focus 6.93

Spectr. Temp. -100.3°C Dome Temp./Hum. -4.3°C 57%H

c λ 397 0 50 1024 4 1 CCDFLAT

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
T= -4.2°C		F=6.93		C 455CCD	1200l/mm G=4497	306μ	6490Å	3/4	Focus test		
BG 39 Filter in							±1Å	1/2			
(Can't remove iT!)								5		(Fast Sweep exp)	
		0.09	G8III+F					6		Telescope uncooled NORMALIZATION	12K
								7			2.7K
								8			
560	1-2"	7.97	M1					9	Marcy Std.		75K
								10			
165	1-2"	11.0	M0					12	Vys 424 Vys Hα	still strong Hα em pgm	Hα em >1K
								13			2.4K
								1/2			
	great!	6.34	B9IIIn	ALT 82°		ABOVE 306μ slit			Seeing Test. Dome West		
	1-2"								Medium SW wind. [Medium uniform cloud]		
								16			
5K		1.35	B7V					17	Telluric Std. medium cloud		
								18		AIR MASS=1.72	

239
pg #2 Fri / Sat

Date 1996 MAR 1/2 Observers Tn [Vys, Hα pgm]

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cc3930~~1~~/309	FLATS x	9				03 18 E	+12°	TUNG Ap 1/4	2s
10	Comp							FeAr Clear	40s
11	BD +33 1646 B	08 02 34	+33 06 25	20 41 27		0 48 E			
12	Comp							"	40s
13	BD +33 1646 A	"	"	21 01 46		0 16 E			1688s
14	Comp							"	40
15	BIAS(4)								
16	Comp							"	40s
17	Vys 516 ?	B1950 ~~08~~ 08 08 24	+52 05	21 59 27		0 32 W			1290
18	Comp							"	40s
19	BIAS(4)								
~~20~~	~~Comp~~								
~~21~~	~~Vys~~ 39 ?	B1950 + PR mot. calc 11 22 06	+40 15 00	22 39 31		2 16 E			346
~~22~~	~~Comp~~								
cc3930/21	Inboard / Outboard	Hartmann				0 0	+32°	FeAr Clear	40/40

Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions ..... cloudy 240

Focus ..... ~~5.23~~ 7.03 ....

~~Spectr.~~ CCD Temp. ... −100.5°C ..... Dome Temp./Hum. ... −4.5°C ... 59.0% H

CD

max

Exp. Mtr.	Seeing	~~Ptg~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
BG39 Filter				CHSSCCD	1200 l/mm G=4497	306μ	6490Å	19ci			11K
still stuck in								14ci			
391	1"–2"	12.1	MO					15	Vys 250B?	Sky Hazy + Moon nearby The NE and Brighter one	
				[Check ID's, note on				16		Good Hα emission	3.7K
500	1"–2"	≈13	M		H/w card]			20	Vys 250A?	The SW and Fainter one Good Hα em →	1.7K
								21		(+ Sky lines inc Solar)	
								1/2			
		~~10.3~~	~~MO~~					22			
350	1"–2"	103	MO ✗	(Looks more like K type)				23	Vys 516 hopefully. 250	[ΔRA 00 00 10 plus ? Δδ −00 02 00]	
				position not too great either.				24			
				← [Looks exactly like		BD +33 1646B]		1/2			
				↑ Also similar to ↑						ΔRA 00 00 15?	
700	1"–2"	9.4	MO	– probably Right.		Not Kept since		25	Vys 39	Too cloudy Δδ −00 00 40	
		Previous "FeNe" comparison saturated a bit.						26			
		exposure was poor too)									
T = −4.5		Set F = ~~7.0~~ 7.03						27/28	focus test		

24/pg#1 Sun/mon

Date 1996 MAR 3/4 Observers Tn [Vys. ~~Hon~~]

Emulsion Batches:

ORDER Sep. GG 385 FOR Comp only

CCD Spectr. Temp.

Focus 7.04

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC393 22/23	Inboard / OUTBOARD Hartmann					0 0	+40°	FeAr Clear	40/42	[illegible]	
CC39324	BIAS(4)										
25	Comp							FeAr clear	40		
26	HD 36395	05 26 18	1900 −03 41 00	18 50 14		0 06E			283	1250	4"
27	Comp							"	40		
28	Comp							"	40		
29	Fld star SW of AC−4 2410 −76			19 04 28		2 36W			482	360	
30	Comp							"	40		
31	VYS413 AC−4 2410 −76	03 02 34	1900 −04 21 13	19 20 27		3 01 W			1031	450	4"
32	Comp							"	40		
33	BIAS(4)			19 41							
34	Comp							"	40		
35	VYS 238 AC+72 3338	06 32 57	1900 +71 59 24	19 56 14		0 03W			1238	450	3"
36	Comp							"	40		
37	Comp							"	40		

CCD Spectr. Temp. −100.5 °C Dome Temp./Hum. −7.7 °C 51.3% H Transparency Conditions Clearing mostly but gusty WNW wind 242

Focus 7.04

Spectr. Temp. Dome Temp./Hum.

C) 397 0 50 1024 4 1 CCDFMT

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no filter				CASSCCD	1200 l/mm G=4497	306μ	6490 ±1Å	3/4	focus	Just slightly set cooler at Row #360	
								1/2			
								5			2.5K
1250	4"	7.97	M1				6490Å	6	Muracy Stdvel	Sky still slightly bright	2.7K
								7			
								8			
360		≈10	Looks 'K' like					9			
								10			
450	4"	10.5	M0					11	Vys Hα pym	(no Hα em ~~Look~~ Hα dark) not previously done.	
								12			
								1/2			
							For HD 40079	13	Δα 00 00 10 Δδ +00 00 24	used For Vys 238 offset	
450	3"	11.0	M0	Looks Like it				14	Vys 238 Vys. Hα pym	Faint star seen 2-3' to NE. No Hα em seen	S/N 100/1
								15			
								16			

243
pg#2 sun/mon

Date 1996 MAR. 3/4 Observers Tn. [Vys. Ha]

Emulsion Batches:
GG 385 Filter

Spectr. Temp.
Focus 7.04
Spectr. Temp.

Plate No.	Object	R.A. ~~1900~~ 1950 + pr motion 50 yrs	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp Mtr	Seeing
CC39338	BD+59 1056 (wrong?)	07 07 54	+59 21 46	20 34 32		0 16 W			1365	510	3-4
39	Comp							FeAr clear	40s		3
40	BIAS(4)			21 01							
41	Comp							"	40		
42	Vys 494A	07 19 12 (B1950 + Pr motion 50yr)	35 59 55	21 09 14		0 38 W			1198	470	3-4
43	Comp							"	40		
44	Vys 494B	"	"	21 33 39		1 05 W			1358	475	3-4
45	Comp							"	40		
46	Vys 494A	"	"	21 59 52		1 26 W			1050	430	3-4
47	Comp							"	40		
48	BIAS(4)			22 23							
49	Comp							"	40		
50	BD+43 1827 (Vys 23)	08 30 36 (B1950 + pr motion)	+42 43 58	22 28 08		0 49 W			1411	510	3-4
51	Comp							"	40		
52	Comp							"	40		

Spectr. Temp. .... Dome Temp./Hum. −9.0°C 55.1%H Transparency Conditions .. Fine .. but .. Full ~~Moon~~ ..

Focus ..7.04..............

~~Spectr.~~ CCD Temp. ..−100.5°C... Dome Temp./Hum. ..−10.2°C 63.0%H

S/N

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCD	P.H.	Program	Remarks	Quality
no filter 510	3-4"	10.0	* MO	CASS CCD	1200 l/mm G=4497	306μ	6490Å	17	Vys x?	Δα 00 00 07 Δδ −00 01 06 } Late, but MO??	100/1
	3							18	Star ≈ 10th seen to west ≈ 5" Another to North also		
								1/2			
								19			
470	3"	10.8	MO					20	Vys 494A	SE and Brighter of pair nasty the cosmic rays	90/1
								21		Δα 00 00 00 Δδ −00 01 00	
425	3"	11.2	MO					22	Vys 494B	Fainter, NW one no Hα em	85/1
								24		Δα ~~−~~ 00 00 04 −00 00 39	
430	3"	10.8	MO					20	Vys 494A	Repeated, no Hα em	
								24			
								1/2			
								24			
710	3-4"	9.8	MO	Looks slightly earlier?,				25	Vys 23	Δα 00 00 05 Δδ −00 00 −21	
								27			
								27			

245pg#3 sun/mon

Date 1996 MAR 3/4 Observers Th. [Vys. ~~[illegible]~~ Hex]

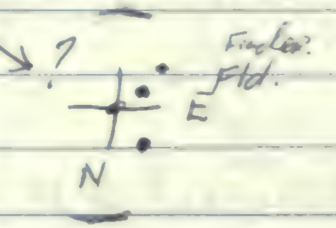
Emulsion Batches:
For comp
GG385 Filter

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CC39353	HD95735	10 57 54	+363800	230435		1 24 E			222
54	Comp							FeAr clear	40
55	Comp	1950	+ 50yr Pm					"	40s
56	BD+38 2037	09 2548	+381701	232729		0 43 W			1061
57	Comp							"	40s
58	BIAS(4)								
59/67	FLATS x 9					1 00W	GG385 Filter Removed	TUNG Ap 1/4	2s
							As no Filter was used for	stellar	
CC39368/69	Inboard/outboard Hartmann			00		0 0	432	FeAr clear	40/43
							Left GG385 Filter OUT	for focus.	

Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions ... Slight haze 246

Focus ....7.04..............

CCD Spectr. Temp. .... Dome Temp./Hum. 70.3°C 68%H

Exp. Mtr.	Seeing	Pl. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
no Filter 1,500		7.48	M2	C455 CCD	1200/m G4497	306u	6490Å	28	Marg Std	Vys 594	
								29			
								5c,			
550	3"	10.4	M0					6	Vys 545		
								7			
								1			max
								2			11.5K
								3/4		Looks Right on at Row # 360 not much change in night	

2447 #1 of 1 [Tue/Wed]

Date 1996 March 5/6 Observers {Vys} /Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC393 70/71	INBOARD/OUTBOARD							Fe Ar clear	60/60
72	BIAS x 4			0 37					—
73	COMP							"	60
74	HD36395	05 26 18	-03 41	19 40 20		0 59 W			700
75	COMP							"	60
76	COMP							"	"
77	AC+51 2576-63	04 50 58	+50 47 35	20 08 22		2 09 W			1200
78	COMP							"	60
79-81	FLAT x 3					2 15 W	+51°	Tung clear	2

Spectr. Temp. ... Focus 6.9 Spectr. Temp. ...

Exp. Mtr.	Seeing
[illegible]	
2250	3"
35	3"

~~Spectr.~~ CCD Temp. -100.5°C Dome Temp./Hum. -2.9°C/74.0% @ focus test Transparency Conditions cleared @ 18:30 FANS OFF (freezing rain was forecasted) hazy down low on horizon

Focus 6.95

Spectr. Temp. Dome Temp./Hum.

412 0 50 1024 4 1 ccd fat

Comparison Filter	Exp	Exp. Mtr.	Seeing	V ~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
		no filter				CASS CCD	1800 ℓ/mm G=5163	30µ	5304 Å	3/4	focus test	just right.	
	–									1			
	60									5			
	100	2250	3"	7.97	M1					6	{V4s} Marcy std vel!	V4s 9, hazy here	1.2K w/ 2 cols
	60									7			
										8			
	1300	535	3"	10.98	M0					9	{V4s} RV	V4s 457, thin cloud field checks out.	~200 above bkg
	60									10		cut short due to cloud.	
	2									11		DOME closed after flats!	15K

pg#1 of 2
249

Date 1996 March 7/8 Observers {Vys}/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC39382/83	INBOARD/OUTBOARD							FeAr Clear	30/30
84	BIAS x 4								–
85	COMP							"	60
86	BD+52 911	04 55 18	+53 00 17	19 31 07		2 00 W			2730
87	COMP							"	60
88	BIAS x 4			20 20					–
89	COMP							"	60
90	AC+47 256-150	07 15 58	+46 16 52	20 27 32		0 36 W			2700
91	COMP							"	60
92	BIAS x 4			21 15					–
93	COMP							"	60
94	BD+02 1729	07 34 11	+02 24 52	21 31 01		1 10 W			1875
95	COMP							"	60
96	BIAS x 4			22 05					–
97-99	FLAT x 3					0 36 W	+35°	Tung clear	1

CCD ~~Spectr.~~ Temp. -102.0°C Dome Temp./Hum. -9.6°C / 50% Transparency Conditions partly cloudy 2.20

Focus 6.99

Spectr. Temp. Dome Temp./Hum. -11.1°C / 52.8% once observing

412 0 50 1024 4 1 ccdfmt.

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ cλ	P.H.	Program	Remarks	Quality
	3.0s?					CASS CCD	1800 l/mm G=5163	30µm	5304 Å	3/4			
	-									1		sum of 4 biases.	
	60									5			
	2700	1367	8"+	9.9	M2		S/N ~ 80:1			6	{V_{ys}} RV	V_{ys} 110 AWFUL SEEING	400 above bkg
	60									7			
	-									1			
	60									8			
	2700	1134	7"	10.5	M2					9	{V_{ys}} RV	V_{ys} 493, seeing still terrible @ zenith.	350 above bkg
	60									10			
	-									1			
	60									11			
	1875	1425	6"	9.6	M0					12	{V_{ys}} RV	V_{ys} 503, seeing improving slightly.	500 above bkg
	60									13			
	-									1			
[illegible] clear	1									14			8.3K

pg#2 of 2

251 Date 1996 March 7/8 Observers {Vys}/Smt

Emulsion Batches:

Spectr. Temp. ..
Focus .... 6.
Spectr. Temp. ..

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC39400	COMP							FeAr clear	60		
01	AC+36 28826	08 22 03	+35 21 00	22 20 14		1 30 W			3035	25	5-6"
02	COMP							"	60		
03	BIAS x 4			23 14					—		
04	COMP							"	60		
05	BD -09 3070	10 ~~…~~ 20 15	-09 43 25	23 43 57		0 31 W			1500	115*	6"-8"
06	COMP							"	60		
07	BIAS x 4			00 12					—		
08	COMP							"	60		
09	BD+01 2447	10 23 49	+01 21 36	00 20 59		1 07 W			1640	[illegible]	8"
10	COMP							"	60		
CG80394→97	HD103095 x 4	11 47 13	+38 26 10						.067		7"
98/99	" x 2				0 59	0 07 E	84° Alt		.133		8"
CC39411	BIAS x 4			01 10					—		
12/13	INBOARD/OUTBOARD					0 0	+38°	FeAr clear	60/60		

CCD Spectr. Temp. -100 °C   Dome Temp./Hum. -12.7°C / 54.3%   Transparency Conditions clear now, moon rising, too

Focus 6.99   25%

Spectr. Temp. ....   Dome Temp./Hum. -13.4°C / 54.4% @ Marcy std vel   FANS OFF

412 0 50 1024 4 1 ccdfmt.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASS CCD	1800 l/mm G=5163	306μ	5304Å	15			
1125	5"-6"	10.7	M0					16	{V_{4S}} RV	V_{4S} 253AB	
								17			
								1			
								18			
955*	6"-8"	10.2	M0					19	{V_{4S}} RV	hazy & windy, + lots of sky V_{4S} 579 S/N < 50:1	
								20			
								1			
								21			
1440	8"	9.65	M2					22	Marcy {V_{4S}} std vel	V_{4S} 127 hazy and windy.	
								23			
	7"	6.45	G8 IV p	LZV CCD TV GUIDER		above 300μ		–	SEEING TEST	Dome SW, light SE wind, -13.8°C, 54.4% RH,	
	8"							–		moon up, clear, bad.	
								1		Dome closed.	
								3/4	focus test	T=-13.0°C F=6.99. end of night. T got down to -14°C.	

253
pg #1

Date 1996 March 8/9 Observers KK / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE 11144	Hartmann-inboard							ThAr	2
45	Hartmann-outboard							"	2
46	bias (4)								—
47	COMP							"	1
48	HD34029	05 09 18	+45 53 47	19 13 ~~[illegible]~~ 24		0 48 W			28 ~~26~~
49	COMP							"	1
50	HD34029			19 15 35		0 50 W			23
51	COMP							"	1
52	HD34029			19 17 51		0 52 W			23
53	COMP							"	1
54	COMP							"	1
55	HD47105	06 31 56	+16 29 05	19 24 53		0 18 E			280
56	COMP							"	1
57	HD47105			19 31 19		0 12 E			280
58	COMP							"	1
59	HD47105			19 37 39		0 04 E			315

CCD ~~Spectr.~~ Temp. ...
Focus....0.22
Spectr. Temp. ...

Exp Mtr.	Seeing
340 ~~[illegible]~~	
[illegible]	
[illegible]	
335	5
[illegible]	
[illegible]	

~~Spectr.~~ CCD Temp. -102.0°C Dome Temp./Hum. -8.6°/53.6% Transparency Conditions mostly cloudy

Focus 0.225 S FAN ON

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. CCD	✗ Grating/ Tilt	N-S Slit	~~Emulsion~~ Cλ	P.H.	Program	Remarks 0 0 128 1024 8 1	Quality
2					Echelle 1860	300 .5795	60μW 400μH	6300 Å	1	focus test	T = -8.6° F = 0.225	16.4K
2									2	"		16.0K
–									1		0 0 256 1024 4 1	
1									3			12.1K
28 ~~40~~	340 ~~[illegible]~~		V 0.08	G5IIIe + G0III					4	KK	Saturated the first attempt α Aur	5.5K
1									3			11.4K
23	300								5	KK	6.3K	stronger than 1st
1									3			11.3K
23	330								6	KK		6.3K
1									3			12.2K
1									3			11.9K
280	335	5	V 1.93	A0IV					4	KK	some cloud here. γ Gem	3.4K
1									3			12.4K
280	330			A0IV					5	KK		3.5K
1									3			10.8K
315	315								4	KK		3.5K

255
Pg #2

Date 1996 March 8/9. Observers KK/Smt

Emulsion Batches:

Spectr. Temp. ...
Focus ...... 0.
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp Mtr.	Seeing
CE11160	COMP							ThAr	1		
61	COMP							"	1		
62	HD8890	01 22 34	+88 46 26	19 52 53		4 45 W			953	315	4-5"
63	COMP							"	1		
64	HD8890			20 10 43		4 50 W			243	[illegible]	
65	COMP							"	1		
66	HD8890			20 17 26		5 00 W			424	[illegible]	
67	COMP							"	1		
68	BIAS (4)			20 26					—		
69	COMP							"	1		
70	HD95689	10 57 34	+62 17 21	20 33 55		3 34 E			290	[illegible]	
71	COMP							"	1		
72	HD95689			20 40 37		3 30 E			186	[illegible]	
73	COMP							"	1		
74	HD95689			20 44 24		3 27 E			115	[illegible]	
75	COMP							"	1		

Spectr. Temp. – Dome Temp./Hum. -11.6°C / 55.1% Transparency Conditions mostly cloudy 256

Focus 0.225

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter	Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	Grating/Tilt	N-S Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	1					ECHELLE 18.60	300 l/mm .5795	60μW 400μM	6300 Å	3			9.9K
	1									3		telescope on E side of pier	8.7K
	953	315	4-5"	2	F8Ib					4	KK	α UMi	
	1									3			7.9K
	243	140								5	KK		3.2K
	1									3			7.6K
	424	134								6	KK		
	1									3			7.3K
	–									1			
	1									3			7.0K
	340	306		Vcomb 1.79	K5IIIa					4	KK		10K
	1									3			7.2K
	186	306								5	KK		1[illegible]K
	1									3			7.9K
	115	315								6	KK		12.5K
										3			7.3K

257
Pg #3

Date 1996 March 8/9 Observers KK/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE 11176	COMP							ThAr	1
77	HD68257	08 06 29	+17 56 58	20 54 57		0 19 E			420
78	COMP							ThAr	1
79	HD68255			21 03 41		0 01.5 E			965
80	COMP							ThAr	1
81	HD68257			21 21 50		0 08 W			440
82	COMP							ThAr	1
83	BIAS (4)			21 32					—
84	COMP							ThAr	1
85	HD79210	9 07 42	+53 07	21 42 01		0 11 E			1800
86	COMP							"	1
87	HD79211	9 07 42	+53 07	22 14 22		0 26 W			2090
88	Comp							"	1
89	HD79210			22 51 14		0 59 W			1850
90	COMP							"	1

CCD ~~Spectr.~~ Temp. -102.0°C   Dome Temp./Hum. -12.3°C/56.6%   Transparency Conditions mostly cloudy but thinning → clear   258

Focus 0.225

Spectr. Temp. ....   Dome Temp./Hum. -14.1°C/60.1% @ HD79211 (end)

0 0 256 1024 4 1

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	(CCD) Inst.	X Grating/ Tilt	N-S Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
r	1					ECHELLE 18.60	300 l/mm .5795	60µW 400µH	6300 Å	3			11.8K
	420	60	4"	✓ 5.05 +1.20	F8V + G0V?					4	kk Vis Bin	ADS 6650AB (W brighter) Some cloud	1.3K
Ar	1									3			10.5K
	965	60	4"	✓ 6.02	dG2					5	KK Vis Bin	ADS 6650C, thin cloud.	sl. brighter than 1st
Ar	1									3			9.7K
	44	60	4"	✓ 5.05 +1.20	F8V +G0V?	or F8V combined?				4	KK Vis Bin	ADS6650AB, clear now	1.6K
Ar	1									3			11.5K
	-									1			
Ar	1									3			9.9K
	18[illegible]	30	4"	✓ 7.64	M0V					6	KK Vis Bin	clear. sl. brighter and ADS 7251A far W, 17" sep.	1.3K
	1									3			9.9K
	209	30	3"-4"	✓ 7.74	M0V					2	"	~~[illegible]~~, sl fainter and E ADS 7251B thin cloud	sl. weaker
	1									3			9.4K
	185	32	4"-5"	✓ 7.64	M0V					6	"	thin cloud, sl brighter and W ADS 7251A again.	9.00
"	1									3			10.5K
	1												

259
pg #4

Date 1996 March 8/9 Observers KK/Smt

Emulsion Batches: ....

Spectr. Temp. ...
Focus ... 0.22
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp	Exp Mtr	Seeing
CE11191	BIAS(4)			23 24	2				—		
92	COMP							ThAr	1		
93	HD89484	10 14 28	+20 20 51	23 32 01		0 06 W			132	340	5"
94	COMP							"	1		
95	HD89485	10 14 28	+20 20 49	23 36 34		0 15 W			440	344	5"
96	COMP							"	1		
97	HD89484	10 14 28	+20 20 51	23 45 59		0 20 W			151	340	5"
98	COMP for below (one for HD89484 not written)							"	1		
99	HD95735	10 57 54	+36 38	23 55 32		0 14 W			1816	35	4-5"
CE11200	COMP							"	1		
01	BIAS(4)								—		
02–08	FLAT x 7					1 04 W	+36°	Tung	1		
09/10	INBOARD/OUTBOARD					2 56 W	"	ThAr	2/2		

Spectr. Temp. .... Dome Temp./Hum. −15.0°C / 63.6% Transparency Conditions thin cloud

Focus 0.225

Spectr. Temp. .... Dome Temp./Hum. −15.5°C @ focus test.

Companion Filter / Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	λ Grating/ Tilt	λ–S Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
—					ECHELLE 18.60	300 l/mm .5795	60μ W 400μ H	6300 Å	1		little streak from cosmic ray	
1									3			11.0K
[illegible]	340	5"	✓ 2.22	K1 III					4	KK Vis Bin	just barely separable. ADS 7724A, brighter and NW	5.3K
1									3			9.2K
[illegible]	344	5"	✓ 3.47	G7 III					5	"	ADS 7724B, fainter and SE	same as above
1									3			9.4K
[illegible]	340	5"	✓ 2.22	K1 III					4	"	ADS 7724A again.	6.5K
1									3			10.0K ~~9.0~~
[illegible]	35	4-5"	✓ 1.60	Mb					4	KK		
1									3			10.0K
—									1			
1							60μ W 600μ H	for flats	3			5K
[illegible]							60μ W 400μ H		7/8	focus test.	0 0 128 1024 8 1	16.4K / 2.6K

pg 261

SAT / SUN

Date 1996 March 9/10 Observers [kk] / Tn / Smt

Emulsion Batches:

CCD Spectr. Temp.

Focus 0.2

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE11211/12	INBOARD/OUTBOARD							ThAr	2/16		
13	BIAS (4)			19 00					—		
14	COMP							"	21		
15	HD8890	1 22 34	+88 46 26	19 11 23		3 52 W			101	40	
16	COMP							ThAr	21		
17	HD8890	1 22 34	+88 46 26	19 17 28		3 59 W			71	276	
18	Comp							ThAr	1		
19	HD8890	"	"	19 21 22		4 03 W			123	325	
20	Comp							ThAr	1		
21	COMP							"	"		
22	HD16895 A	02 37 22	+48 48 20	19 48 51		4 02 W			146		
23	COMP							"	1		
24	HD16895 B	"	"	19 55 50		4 45 W			2300		3.6"
25	Comp							"	1		
26	HD16895 A	"	"	20 35 28		4 48 W			134		
27	COMP							"	1		

Spectr. Temp. (CCD) −100.5°C Dome Temp./Hum. −8.5°C / 61.3% H @ focus test Transparency Conditions Fine

Focus 0.225

Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ph. Mag.	Sp.	Inst. (echelle)	Grating/Tilt	Slit (N/S)	~~Emulsion~~ (CCD)	P.H.	Program	Remarks	Quality
Ar	2|10					18.60	300 .5795	60μ W 400μ H	6300Å	1/2	focus test	outboard is VERY weak! 0 0 128 1024 8 1 accept	
	—									1		0 0 256 1024 4 1	
	21									3			
	101	360		2	F8Ib					4	KK		
14	21									3			
	71	376		"	"					4	KK		8K
Ar	1									3			
	123	325		"	"					4			
ThAr	1									3			
"	"									3			
	196	80 ?		4.13	F7V					5	KK Vis Bin		1.3K
"	1		-							3			
	2300	1	3"–6"	9.87	M1V					6	"	Some cloud	1hr above bkg
"	1									3			
	154	30		4.13	F7V					5	"	solid cloud bank coming	
"	1									3			

263
pg#2

SAT/SUN

Date 1996.MAR.9/10 Observers [KK]/Tn/Smt

Emulsion Batches:

Spectr. Temp. ...
Focus 0.2
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CE11228	BIAS(4)			20 39					—		
29	COMP							ThAr	1		
30	HD90839	10 24 14	+56 29 36	20 45 20		2 24 E			1600	[illegible]	5"
31	Comp							ThAr	1		
32	HD90839	10 24 14	+56 29 36	21 15 57		2 06 E			814	200	4"
33	COMP							"	1		
34	HD90839	"	"	21 30 52		1 48E			1093	97	3"
35	COMP							"	1		
36	BIAS(4)			21 49					—		
37	COMP							"	1		
38	HD68257	08 06 29	+17 56 58	22 05 35		0 54 W			330	72	3-4"
39	COMP							"	1		
40	HD68255	"	"	22 17 54		1 09 W			725	76	
41	COMP							"	1		
42	HD68257			22 28 24		1 16 W			301	71	
43	COMP							"	1		

CCD
Spectr. Temp. -100.1°C Dome Temp./Hum. -9.4°C/62%H Transparency Conditions Part Cloudy

Focus 0.225

Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	~~Plg.~~ Mag.	Sp.	Inst. echelle	Grating/ × Tilt	N-S Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				CCD 18.60	0300 15795	60u 400u	6300Å	1			
								3			
80	5"	4.84	F8 V					4	kk Std Vel	cloudy now	2K
								3			
200	4"	"	"					4	"	thinner cloud now. → clear	
								3			
197	3"	"	"					4	"	clear here, partly cloudy overall.	
								3			
								1		attempted HD79874 unsuccessfully.	
								3			
72	3-4"	5.05	F8 V?					5	kk Vis Bin	brighter and WSW, clear here ADS6650AB	1.5K
								3			
76		6.20	G0 V					6	"	fainter and ENE, still clear ADS6650C	1.6K
								3			
71		5.05	F8 V					5	"	ADS6650AB again.	
								3			

265
19#3 SAT/Sun

Date 1996 March 9/10 Observers [KK]/Tn/Smt

Emulsion Batches:

CCD Spectr. Temp. [illegible]
Focus 0.22
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
CE11244	BIAS(4)			22 35					0		
45	COMP							ThAr	1s		
46	HD79210	09 07 42	+53 07 00	22 47 40		0 53 W			1482	36	3"
47	Comp							ThAr	1s		
48	HD79211	"	"	23 13 52		1 16 W			1344	36	
49	Comp							ThAr	1s		
50	HD79210	"	"	23 37 38		1 43 W			1470	37	2½"
51	Comp							ThAr	1s		
52	BIAS(4)			0 04					0		
53	COMP							"	1		
54	HD99028	11 18 43	+11 04 49	00 10 59		0 07 E			620	[illegible]	4"
55	COMP							"	1		
56	HD99028			00 22 49		0 04 W			600	[illegible]	
57	COMP							"	1		
58	HD99028			00 34 22		0 15 W			550	[illegible]	
59	COMP							"	1		

CCD Spectr. Temp. -100.7°C .... Dome Temp./Hum. -10.4°C/65.9% Transparency Conditions .. hazy → clear 268

Focus ... 0.225 ....

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. CCD	Grating/Tilt	N-S Slit	Emulsion	P.H.	Program	Remarks	Quality
	0					ECHELLE 18.60	300 l/mm .5945	60μW 400μH	6300Å	1			
	1s									3			
	1482	36	3"	7.64	M0V					4	KK Vis Bin	ADS7251A, W one 17" separation	1.3K
	1s									3			
	1344	36		7.74	M0V					5	"	B, E one	1.1K
	1s									3			
	1470	37	2-3"	7.64	M0V					4	"	A again	
	1s									3			
	0									1			
	1									3			
	600	300	4"	4.03	F2 IV					6	KK		
	1									3			
	600	311								6	KK		
	1									3			
	550	314								6	KK		
	1									3			

267
pg # 4

Date 1996 March 9/10 Observers [KK] / Tn / Smt

Emulsion Batches:

Spectr. Temp. ...
Focus ... 0
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CE11260	COMP							ThAr	1		
61	HD110379	12 36 36	-00 54 03	00 52 57		0 51 E			140	138	4-5"
62	COMP							"	1		
63	HD110380	"	"	00 57 54		0 45 E			200	131	5"
64	COMP							"	1		
65	HD110379	"	"	01 03 24		0 39 E			240	190.	5"
66	COMP							"	1		
67	BIAS(4)			1 09					0		
68	COMP							"	1		
69	HD89484	10 14 28	+20 20 51	01 17 58		1 55 W			95	[illegible]5	4-5"
70	COMP							"	1		
71	HD89485	"	+20 20 49	01 21 54		2 02 W			300	[illegible]	
72	COMP							"	1		
73	HD89484	"	+20 20 51	01 28 52		2 06 W			120	[illegible]	
74	COMP							"			

Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions . clear 268

Focus .... 0.225 ....

Spectr. Temp. .... Dome Temp./Hum. -11.6°C 67.5%H

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	N-S Slit	Emulsion	P.H.	Program	Remarks	Quality
1									3			
140	138	4"-5"	3.48	F0 V					4	KK Vis Bin	not really separated. ADS 8630 A, E one.	4K
1									3		(HD #'s reversed? E is larger than W one)	usually
200	131	5"	3.50	F0 V					5	"	not separated anymore. ADS 8630 B, W one	2K !
1									3		guiding on W side of blob.	
240	290 !	5"	3.48	F0 V					4	"	went too long (misread previous) A again (E side of blob)	2.8K
1									3			
0	–								1			
1									3			
95	345	4"-5"	2.22	K1 III					6	KK Vis Bin		
1									3			
300	350		347	G7 III					2	"		
1									3			
120	320		2.22	K1 III					6	"		
									3			

269 #5

Date 1996 MAR. 9/10 Observers [KK]/Ta/Sat

Emulsion Batches: ....

Spectr. Temp. ...
Focus 0.22
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
ce11275	comp							ThAr	1s		
76	HD 122742	13 58 38	+11 16 34	01 36 49		1 11 E			1200	76	6-5"
77	Comp							"	1s		
78	HD122742			01 58 18		0 49 E			1250	78	6-5"
79	COMP							"	1		
80	HD122742			02 21 00		0 30 E			947	80	4-5"
81	COMP							"	1		
82	BIAS(4)			02 38					—		
83	Comp							"	1s		
84	HD121325 A	13 49 43	-07 34 00	02 44 29		0 02 W			1009	18	3-4"
85	Comp							"	1s		
86	HD121325 B	"	"	03 03 14		0 33 W			1728	25	4-5"
87	Comp							"	1s		
88	HD121325 A	"	"	03 33 57		0 59 W			1448	13	4"
89	Comp							"	1s		
90	BIAS(4)										

Spectr. Temp. .... Dome Temp./Hum. -11.5°C/67.0% Transparency Conditions clear, moon @ 15h2m ra -16° dec

Focus 0.225

~~Spectr.~~ CCD Temp. -100.5°C Dome Temp./Hum. -11.3°C/66.3%H

270

Cd

0 0 256 1024 4 1

Comparison Filter	Exp	Exp. Mtr.	Seeing	~~Ph.~~ Mag.	Sp.	Inst. echelle	Grating/ ✗ Tilt	N–S Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
r	1s					CCD 18.60	0300/m •5795	60u 400u	6300Å	3			max
	1200	76	6"–8"	6.21	G8V					4	KK pgm		1.2K
	1s									3			
	1250	88	6"–5"	"	"					4	"		1.8K
	1									3			
	947	80	4"–5"	"	"					4	"	seeing improving.	1.5K
	1									3			8.6K
	–									1			
	1s									3			
	1009	18	3"–4"	6.60	F8V					2	KK Vis Bin	West and brighter one	830
	1s									3		Reasonably separated	
	17[illegible]	25	4"–5"	7.50*		~~[illegible]~~ Later than "A"				6	"	poorly separated, but separated	560
	1s									3			
	14[illegible]	13	4"	6.60	F8V					2	"		950
	1s									3			10.5K
										1/2			

pg#6
271
SAT/Sun

Date 1996 MAR 9/10 Observers [KK]/Jn/Smt

Emulsion Batches:

Spectr. Temp. ...
Focus 0:2
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE11291	Comp							ThAr	1s		
92	HD131156A	14 46 46	+19 30 57	04 06 31		0 16 W			307	85	3-4"
93	Comp							"	1s		
94	HD131156B	"	"	04 14 05		0 50 W			1900	46	4"
95	Comp							"	1sec		
96	HD131156A	"	"	04 47 44		1 01 W			535	44	4"
97	COMP							"	1		
98	BIAS(4)			04 59					—		
99	COMP							"	1		
CE11300	HD146361	16 16 56	+34 06 42	05 06 19		0 02 W			865	100	3-4"
01	Comp							"	1		
02	HD146362	"	+34 06 42	05 22 26		0 19 W			933	36	
03	Comp							"	1		
04	HD146361	"	"	05 39 37		0 28 W			419	50	
05	Comp								1		

Spectr. Temp. .... Dome Temp./Hum. -11.2°C/66.7% Transparency Conditions ... clear, moon @ meridian

Focus ..... 0:225 .... 2n

Spectr. Temp. .... Dome Temp./Hum. {slit (N/S alignment)}

Comparison Filter Exp	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. Echelle ccD	Grating/ × Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1s					18:60	0300 .5795	60u W 400u N	6300Å	3			
307	85	3"-4"	4.74	G8V					4	KK Vis Bin	ADS 9413A, brighter and SE	1.2K
1s									3			
1900	46	4"	6.90	K5V					5	KK Vis Bin	seeing is variable, fainter NW one	2.2K!
180s									3			
535	144	4"	4.74	G8V					4	"	Exp mtr counts are unreliable.	29K!
1									3			
-									1			
1									3			
935	100	3"-4"	5.58	G0V					4	KK Vis Bin	ADS 9979A, brighter NE	2.2K
1									3			
935	36		6.59	G1V					2	"	B	
1									3			
A1	50		5.58	G0V					4	"	A	
1									3			

pg #7

273

Date 1996 March 9/10 Observers [KK]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE11306	COMP							ThAr	1
07	HD8890	01 22 34	+88 46 26	05 53 08		9 46 E			81
08	COMP							"	1
09	HD8890			05 55 52		9 43 E			97
10	COMP							"	1
11	HD8890			05 58 50		9 40 E			66
12	COMP							"	1
13	BIAS (4)			06 01 31					—
14 – 20	FLAT x 7					2 40 W	+13°	Tung	2s
21/22	INBOARD/OUTBOARD					"	"	ThAr	~~[illegible]~~
									1/15

~~Spectr.~~ CCD Temp. −102.0°C Dome Temp./Hum. −11.5°C / 67.5% Transparency Conditions clear, dawn approaching

Focus 0.225

274

Spectr. Temp. Dome Temp./Hum. −11.6°C @ focus test.

0 0 256 1024 4 1

Comparison Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	N–S Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
1					ECHELLE 18.60	300 l/mm .5795	60μ W 400μ H	6300 Å	3			
81	300	4"	2	F8Ib					6	KK	2nd time tonight. Last time was ~10h ago	5K
1									3			
97	400								6	KK		6K
1									3			
66	300								6	KK		5K
1									3			
–							400μ = .225 ✓		1			
2s							60μ W 1000μH	= .205 ✓ for flats	3	Position set −.150		10.5K
[illegible]							60μ W 400μH		7/8	focus test	0 0 128 1024 8 1 end of night	13K/11.5K

strengths are ridiculously off. Perhaps slit pos'n was moved instead of slit height some time between flats last night and focus test at beginning of tonight

275
pg #1 sun/mon

Date 1996 March 10/11 Observers [kk]/Th/Smt

Emulsion Batches:

Spectr. Temp. ...

Focus ......0.

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp Mtr	Seeing
CE11323/24	INBOARD/OUTBOARD							ThAr	1/10*		
25	BIAS(4)			19 59					—		
26	COMP							"	1		
27	HD20902	03 17 11	+49 30 19	20 09 41		3 46 W			139	300	
28	COMP							"	1		
29	HD20902			20 14 11		3 50 W			99	333	
30	COMP							"	1		
31	HD20902			20 18 05		3 54 W			103	343	3"
32	COMP							"	1		
33	Comp							"	1		
34	HD32147	04 55 51	-05 52 16	20 27 22		2 40 W			866	5	
35	Comp							"	1		
36	HD32147	"	"	20 47 25		3 05 W			1190	38	3"
37	COMP							"	1		
38	HD32147	"	"	21 09 33		3 21 W			793	5	
39	Comp							"	1		

CCD
Spectr. Temp. ..-100.2°c.... Dome Temp./Hum. -4.6°c/59.8% Transparency Conditions ...mostly cloudy......276

Focus ....0.235........

Spectr. Temp. .... Dome Temp./Hum. -5.3°C / 58.2%H

experimented with different slit pos'ns to help →

Exp. Mtr.	Seeing	~~Pg.~~ V Mag.	Sp.	Inst. (CCD)	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
				ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300Å	1/2	focus test*	0 0 128 1024 8 1 *[illegible] is much weaker for same time and has wider lines	
						POS'N		1		0 0 256 1024 4 1	
						~~.150~~ .150 as on previous		3	→ Old References mention .333 and .200 as usual set		
300		1.79	F5Ib			nights		4	KK		7K
						(probably months)		3			
333								4	"		"
								3			
343	3"							4	"	all 3, same strength	"
								3			
								3			
5		6.21	K3 V					5	KK pgm	some cloud → very thick cloud.	
								3			
28	3"	"	"					5	KK	cloud passed quickly clear for this one.	1.3K
								3			
5		"	"					5	KK	thin cloud increasing.	
								3			12.5K

277 PF#2 Sun/mon

Date 1996 March 10/11 Observers [KK] / Tn / Smt

Emulsion Batches:

Spectr. Temp.

Focus 0.23

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
ccd 3240	BIAS(4)			21 27					0		
41	Comp							ThAr	1s		
42	HD60179	7 28 13	+32 06 27	21 29 52		0 59W			326	206	3"
43	Comp							"	1s		
44	HD60178	"	"	21 37 12		1 08 W			390	240	<3"
45	Comp							"	1s		
46	HD60179	"	"	21 45 22		1 12W			106	132	<3"
47	Comp							"	1s		
48	Comp							"	1		
49	HD 56986 A	7 14 09	22 10 00	21 54 21		1 35W			112	87	3"
50	Comp							"	1		
51	HD56986B	"	"	21 58 55		2 17W			2338	31	3"
52	Comp							"	1		
53	HD 56986 A	"	"	22 39 57		2 21 W			151	80	
54	Comp							"	1		
55	BIAS(4)			22 44							

~~Spectr.~~ CCD Temp. -99.2°C Dome Temp./Hum. -5.3°C/58.2% Transparency Conditions mostly cloudy 278

Focus 0.235

Spectr. Temp. -100.1°C Dome Temp./Hum. -5.8°C/59.9%H

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	~~Pg.~~ V Mag.	Sp.	Inst. Echelle	Grating/ Tilt	Slit	~~Emulsion~~ CA	P.H.	Program	Remarks	Quality
	0					CCD	300 .5795	60u 400u	6300A	1/2			
A	1s									3			
	326	206	3"	1.94	A1V					2	KK Vis Bin	α Gem Incl and	
	1s									3			
	390	240	<3"	2.92	A2Vm					6	"	clearer now	
	1s									3			
	405	230	<3"	1.94	A1V					2			6.6K
"	1s									3			
"	1									3		clearing here	
	112	87	3"	3.55	F0IV					4	KK Vis Bin	ADS 5983A	3.3K
"	1									3			
	338	21	3"	8.18	K3V					5	"	ADS 5983B	1.6K
"	1									3			
	151	80		3.55	F0IV					4			
"	1									3			
										1/2			

279 pg#3 sun/mon

Date 1996 MAR. 10/11 .... Observers [KK] / Tr. / Smt ....

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
cell 3 56	Comp			"				ThAr	1s		
57	HD 74874A	8 41 29	+64707	21 51 53					97	77	
58	Comp							"	1		
59	HD74874B	84129	+6 4707	22 56 09		1 43W			2058	37	<3"
60	Comp							"	1		
61	HD74874A	"	"	233221		1 47W			113	85	
62	Comp							"	1		
63	Comp							"	1		
64	HD8890	1 2234	+884626	23 4519		8 32W			183	335	3-4"
65	Comp							"	1		
66	HD8890	"	"	234933					120	345	
67	Comp							"	1		
68	HD8890	"	"	23 5239					193	320	
69	Comp							"	1		
70	BIAS(4)										

Spectr. Temp. ...
Focus ... 0.2
CCD Temp. ...

Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions ... improving ...

Focus ... 0.235 ...

CCD Temp. .... Dome Temp./Hum. ... −6.2°C / 62% H

Comparison Filter Exp	Exp. Mtr.	Seeing	Fig. Mag.	Sp.	Inst. eck/k	Grating/ X Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1s					CCD 1860	0300 .5795	60μ W 400μ H	6300Å	3			
97	77		3.40		(Later Than B)				2	KK Vis Bin	APS6993A	2.5K
1									3			
253	37	<3"	6.80	dF7					5	〃	B Difficult, but separable	2.4K
1									3			
113	85		3.40						2	〃	A	
1									3			
1									3			
183	335	3"4'	2	F8Ib					4			
1									3			
120	345								4			
1									3			
173	320								4			
1									3			
									1/2			

281
pg#4

sun/moon

Date 1996 MAR 10/11 Observers [KK]/Ta/Sat

Emulsion Batches:

Spectr. Temp. ...
Focus 0.25
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
ce11371	Comp							ThAr	1		
72	HD 79210	9 07 42	+53 07 00	00 07 13		2 18 W			1505	30	<3"
73	Comp							ThAr	1		
74	HD 79211	"	"	00 35 12		2 48 W			1600	30	2-3"
75	COMP							"	1		
76	HD 79210	"	"	01 05 16		3 17 W			1600	31	2-3"
77	COMP							"	1		
78	BIAS (4)			01 34					0		
79	COMP							"	1		
80	HD 90839	10 24 14	+56 29 36	01 41 16		2 20 W			550	[illegible]	4"
81	COMP							"	1		
82	HD 90839	"	"	01 52 23		2 37 W			900	[illegible]0	
83	COMP							"	1		
84-90	FLAT x 7					3h W	+17°	Tung	2		
~~92~~ 91	BIAS (4)			02 24					0		
92/93	INBOARD/OUTBOARD										

Spectr. Temp. .... Dome Temp./Hum. -6.5°C / 63.6% Transparency Conditions Part cloudy

Focus 0.235

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1 ccdfmt

Comparison Exp	Exp. Mtr.	Seeing	Pkg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1					Echelle 18'60	0300 .5795	60 400	6300Å	3			
1535	30	<3"	7.64	M0 V					6	KK Vis Bin	ADS7251A Slightly brighter westone	1.5K
1									3			
1200	30	2"-3"	7.74	M0 V					5	"	ADS 7251B, sl fainter & E Seeing is very nice now.	1.3K
1									3			
1600	31	2"-3"	7.64	M0 V					6	"	A again. clouding in	1.5K
1									3			
0									1			
1									3			
550	60	4"	4.84	F8 V					4	std vel	cloudy	1.5K
1									3			
900	10		"	"					4	"	very cloudy all over. moon covered up.	500 ADU above sky
1									3			
2									3		flats are now ½ as strong as last run, last night they were ⅓ as strong.	7K
)									1			

283
Pg#1 Mon/Tues

Date 1996 MAR 11/12 ..... Observers [KK]/Tn/Smt ....

Emulsion Batches:

....

....

....

CCD Spectr. Temp. ...

Focus .... 0.

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CE11394/95	INBOARD/OUTBOARD							ThAr	3/2		
96	BIAS(4)			19 09					0		
97	COMP							"	2		
98	HD47105	06 31 56	+16 29 05	19 11 10		0 23 E			80	560	
99	COMP							"	2		
CE11400	HD47105			19 14 48		0 19 E			80	5[illegible]5	
01	COMP							"	1	([illegible]ps)	
02	HD47105			19 18 23		0 15 E			118	560	
03	COMP							"	2		
04	Comp							"	2		
05	HD20902	3 17 11	+49 30 19	19 30 07		3 10 W			75	[illegible]20	3"-4"
06	Comp							"	2		
07	HD20902			19 33 36		3 14 W			120	[illegible]0	
08	COMP							"	2		
09	HD20902			19 37 34		3 18 W			120	[illegible]	
10	COMP							"	2		

~~Spectr.~~ CCD Temp. -100.5°C Dome Temp./Hum. -0.7°C/59.8% @ focus test. Transparency Conditions clear

Focus 0.225

Spectr. Temp. Dome Temp./Hum. Now a EW orientation slit

Comparison Filter / Exp	Exp. Mtr.	Seeing	~~Pg.~~ V Mag.	Sp.	Inst. CCD	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
3/2					ECHELLE 18.60	300 l/mm .5795	60μ W 400μ H	6300Å	7/8	focus test.	0 0 128 1024 8 1	
0							E-W		1		0 0 256 1024 4 1	
2							now.		3			
80	560		1.93	A0IV					4	KK	γ Gem	5.0K
2									3			
80	565								4	"		4.7K
1	(comps)								3			
118	650								4	"		5.0K
2									3			
2									3			
75	620	3″–4″	1.79	F5Ib					5	KK	α Per	4.0K
2									3			
120	1000								5	KK		12.4K
2									3			
120	1010								5	KK		14K
2									3			

pg # 2 Mon/Tues
285
Date 1996 March 11/12 Observers [kk]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
ce11411	Comp							ThAr	2
12	HD32147	04 55 51	-05 52 16	19 45 40		2 02 W			900
13	COMP							"	2
14	HD32147	"	"	20 02 03		2 16 W			721
15	COMP							"	2
16	HD32147	"	"	20 15 21		2 30 W			794
17	Comp							"	2
18	BIAS(4)			2030					
19	Comp							"	2
20	HD50635A	06 49 00	+13 18 18	20 37 28		0 48 W			136
21	Comp							"	2
22	HD50635 B	"	"	20 41 43		1 08 W			1081
23	Comp							"	2
24	HD50635A	"	"	21 01 12		1 12 W			146
25	Comp								2

Spectr. Temp.
Focus 0.
Spectr. Temp.

Exp Mtr.	Seeing
79	3-4"
90	
87	3"
14	2-3"
48	3"
100	2-3"

CCD Spectr. Temp. -99.9°C Dome Temp./Hum. -1.3°C/60.0% Transparency Conditions clear, a few very thin clouds 286

Focus 0.225

CCD Spectr. Temp. -100.1°C Dome Temp./Hum. -1.9°C / 63.3% H

0 0 256 1024 4 1

Comparison Exp	Exp. Mtr.	Seeing	V Mag.	Sp.	CCD Inst.	X Grating/ Tilt	E-W Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
2					ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300Å	3		≃	MAX ADU
900	79	3-4"	6.21	K3V					6	KK		1.9K
2									3			
721	80		"	"					6	KK		1.5K
2									3			
794	82	3"	"	"					6	KK pym		1.4K
2									3			
									1/2			
2									3			
1½	84	2-3"	4.74	F0Vp					2	KK Vis Bin	Bright NW one	900
2									3			
104	46	3"	7.68	G6V					4	"	well separated	650
2									3	Rebalanced Exp meter. It had been slightly falling		
14	100	2-3"	4.74	F0Vp					2	"		860
2									3			

19#3
287

Mon/Tues

Date 1996 MAR 11/12 Observers [KK]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
ce 11426	Comp							ThAr	2s
27	HD 59438A	07 24 49	-14 47	21 10 08		0 53 W			540
28	Comp							"	2
29	HD59438B	"	"	21 26		1 09 W			828
30	Comp							"	2
31	HD59438A	"	"	21 37 42		1 28 W			1002
32	Comp							"	2
33	BIAS(4)			21 56					0
34	Comp							"	2
35	HD8890	01 22 34	+88 46 26	22 06 55		6 56 W			45
36	Comp							"	2
37	HD8890			22 09 46		6 59 W			55
38	COMP								2
39	HD8890			22 12 19		7 02 W			50
40	COMP								2

Spectr. Temp.
Focus 0.22
Spectr. Temp.

Exp. Mtr	Seeing
30	
40	3"
43	3"
40	3"

~~Spectr.~~ CCD Temp. -100.1°C   Dome Temp./Hum. -1.9°C/64.4%   Transparency Conditions Slightly hazy

Focus 0.225

Spectr. Temp. ....   Dome Temp./Hum. ....

0 0 256 1024 4 1

Comparison Filter Exp	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. Echelle	Grating/ × Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2s					CCD 18·60	0300 ·5795	60u 400u	W H 6300Å	3			
540	30		6·40	F7V					4	Kf, VisBin	ADS6126A Brighter South one	500
2									3			
888	40	3"	7·50						5	"	B Fainter one, seeing blew up @ end.	250 [illegible]
2									3			
1002	43	3"	6·40	F7V					4	"	A again.	530
2									3			
0									1			
2									3		telescope pseudo-reversed.	
45	370	3"	2.5	F8Ib					2	KK		3K
2									3			
55	380								2	"		3K
2									3			
50	400								2			
2									3			

289
pg #4 mon/Tues

Date 1996 March 11/12 Observers [KK]/Tn/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
cell441	Comp							ThAr	2
42	HD 78154 A	09 01 36	+67 32 26	22 19 09		0 13 W			75
43	COMP							"	2
44	HD 78154 B	"	"	22 22 45		0 46 W			1850
45	COMP							"	2
46	HD 78154 A	"	"	22 55 30		0 50 W			97
47	Comp							"	2
48	BIAS(4)			22 58					
49	Comp							"	2
50	HD 76644	8 52 22	+48 26 04	23 08 39		1 15 W			136
51	Comp							"	2
52	Comp							"	2
53	HD 90839	10 24 11	+56 29 36	23 27 51		0 03 W			174
54	Comp							"	2
55	HD 908 39	"	"	23 32		0 08 W			193
56	COMP							"	2

Spectr. Temp.
Focus 0.22
Spectr. Temp.

Exp. Mtr.	Seeing
50	3"
47	3"
70	2-3"
450	2"
135	2"
55	

Spectr. Temp. .... Dome Temp./Hum. -2.2°C / 66.0% Transparency Conditions pretty clear, some haze

290

Focus 0.225

Spectr. Temp. .... Dome Temp./Hum. -2.6°C / 70%

0 0 256 1024 4 1 ccdfnt

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. CCD	Grating/Tilt	E-W Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	2					ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300Å	3			
	75	50	3"	4.85	F6 IV					4	KK Vis Bin	ADS7203A, and 5, well sep'd. 4 mags brighter	450 some
	2									3			
	1850	47	3"	8.16	N/A	"Later than A"				5	"	B good separation	500 some
	2									3			
	97	70	2-3"	4.85	F6 IV					4	"		
	2									3			
										1/2			
	2									3	KK Vis Bin	couldn't see faint companions	
	130	450	2"	3.14	A7 IV					2		ADS 7114A	33K
	2									3			
	2									3			
	174	135	2"	4.84	F8 V					4	Stiavel		1K
	2									3			
		165		"	"					4	"		
	2									3			

29s
pg#5

Mon / Tues

Date 1996 MAR 11/12 Observers [KK] / Tn / Sut

Emulsion Batches:

Spectr. Temp. ...
Focus ...
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp	Exp Mtr	Seeing
CE11457	HD 90839	10 24 11	+56 29 36	23 36 35		0 14 W			275	70	2-3"
58	Comp							ThAr	2s		
59	Comp							"	2s		
60	HD 79210	9 07 42	+53 07 00	23 48 20		1 48 W			648	40	2-3"
61	Comp							"	2s		
62	HD 79211	9 07 42	"	00 00 33		2 06 W			999	46	2"
63	Comp							"	2		
64	HD 79210	"	"	00 18 35		2 23 W			932	49	2"
65	Comp							"	2		
66	BIAS(4)			00 35							
67	Comp							"	2		
68	HD110379/80	12 36 36	-00 54 03	00 45 15		0 51 E			115	[illegible]	
69	Comp.							"	2		
70	HD110379/80	"	"	00 50 32					108	[illegible]	
71	Comp							"	2		

Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions ... Fine ....

Focus ..... 0.225 .....

Spectr. Temp. .... Dome Temp./Hum. ....

ADM
MAK

Comparison Filter	Exp	Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. Echelle	Grating/ × Tilt	Slit	~~Emulsion~~ CCD	P.H.	Program	Remarks	Quality
	27s	170	2"-3"	4.84	F8V	CCD 18.60	0300 .5795	60u 400u	6300Å	4	Std Vel		
ThAr	2s									3			
"	2s									3			
	643	40	2"-3"	7.64	MOV					6	KK VisBin	ADS 7251A West one is sl brighter??	(750 above
"	2s									3		Look the same tonight.	bias)
	9??	46	2"	7.74	MOV					5	"	East one	1K above
"	2									3			
	922	49	2"	7.64	MOV					6	"		1.1K above
"	2									3			
		.								1/2			
"	2									3			
	15	200		~~3.48~~/3.50	FOV					4	KK VisBin	2.5" ~~X~~ separation Experiment,	
"	2									3		well resolved for guiding, but forgot	
	15	200		"		"				4		that Y bin of 4 lost	
"	2									3		that resolution.	

293
pg #6

Date 1996. March. 11/12. Observers [KK] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
CE11472	Comp							ThAr	2		
73	HD99028	11 18 43	+11 04 49	00 59 05		0 45 W			400	74	
74	COMP							"	2		
75	HD99028	"	"	01 07 48		0 54 W			400	127	
76	COMP							"	2		
77	HD99028	"	"	01 16 44		01 04 W			465	383	
78	COMP							"	2		
79	BIAS(4)			01 31					0		
80	COMP							"	2		
81	HD120476 A	13 44 36	+27 29	01 34 23		0 55 E			940	31	2-3"
82	COMP							"	2		
83	HD120476B	"	"	01 51 56		0 19 E			2068	16	3"
84	Comp							"	2		
85	HD120476A	"	"	02 29 25		0 13 W			1777	21	3"
86	COMP							"	2		
87	BIAS(4)			3 00					0		

Spectr. Temp. .... Dome Temp./Hum. -3.4°C/76.3% Transparency Conditions clear .... 294.

Focus ....0.225............

~~Spectr.~~ CCD Temp. - ....°C... Dome Temp./Hum. ....

0 0 256 1024 4 1

Comparison/Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
Ar	2					ECHELLE 18.60	300 ℓ/mm .5795	60 μW 400 μH	6300Å	3			
	400	474		4.03	F2 IV					5	KK		4.6K
"	2									3			
	410	527								5	KK		4.0K
"	2									3			
	415	583								5	KK		4.6K
	2									3			
	0									1			
"	2									3			
	940	31	2"-3"	7.59	dK6					4	KK Vis Bin	ADS 9031 A, sl brighter and N	5[illegible] above bias
"	2									3		nice separation	
	[illegible]	16	3"	8.03	~~G~~N/A	(similar to	A)			5	"	ADS 9031B, sl fainter and S	650 above
"	2									3			
	[illegible]	21	3"	7.59	dK6					4	"	A again.	1.1K
"	2									3			
	0									1/2			

295
pj#7

Date 1996 MAR 11/12 .... Observers [KK]/Tr/Smt ....

Emulsion Batches: ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE11488	Comp							ThAr	2
89	HD 131156A	14 46 46	+19 30 57	03 06 16		0 38 E			196
90	Comp							ThAr	2
91	HD131156B			03 11 44		0 07 W			2575
92	Comp							"	2
93	HD131156A			03 57 46		0 16 W			372
94	COMP							"	2
95	BIAS(4)			04 06					0
96	COMP							"	2
97	HD138918	15 30 01	+10 52 23	04 12 42		0 15 E			185
98	COMP							"	2
99	HD138917	"	+10 52 19	04 17 15		0 04 E			540
CE11500	COMP							"	2
01	HD138918	"	+10 52 23	04 28 16		0 01 W			220
02	COMP							"	2

~~Spectr.~~ CCD Temp. -100.4°C Dome Temp./Hum. -4.0°C/82.6% Transparency Conditions Slightly hazy 296

Focus 0.225

Spectr. Temp. Dome Temp./Hum.

cd 0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	~~Ptg.~~ Mag.	Sp.	Inst.	Grating/ × Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	2					Echelle CCD 18.60	0300 .5795	60μ	6300Å	3			
	196	90	3"	4.74	G8V					2	KK Vis Bin	ADS 9413A SE one	1.5K
	2									3			
	25.5	46		6.90	K5V					6	"	B large ~~er~~ strength difference due to spectral type.	3.5k!
	2									3			
	372	180	3"	4.74	G8V					2	"	A again. well-matched with B.	3.5K
	2									3			
	0									1			
	2									3			
	115	163	3"	4.20	F0IV					4	KK Vis Bin	very hazy now, fog? ADS9701A, brighter and N	1.8K
	2									3			
	540	174	3"	5.20	dF0					5	"	catwalk railing frosty, 95% RH ADS9701B, on catwalk	2.2K
	2									3			
	200	215	3"	4.20	F0IV					4	"	A again.	
	2									3			

297
pg #8

Date 1996 March 11/12 Observers [KK] / Tr / Smt

Emulsion Batches: ....

CCD Temp. ...
Focus 0.22
CCD Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CE11503	COMP							ThAr	2		
04	HD146361	16 10 56	+34 06 42	04 40 49		0 20 E			610	108	3"
05	COMP							"	2		
06	HD146362	"	"	04 53 06		0 16 W			2000	79	3"
07	COMP							"	2		
08	HD146361	"	"	05 28 21		0 30 W			750	96	3"
09	COMP							"	2		
10	BIAS(4)			05 43					0		
11	COMP							"	2		
12	HD8890	1 22 34	+88 46 26	05 49 21		9 43 E			75	350	3"
13	Comp							"	2		
14	HD8890	"	"	05 52 03		9 40 E			80	340	
15	Comp							"	2		
16	HD8890	"	"	05 55 03		9 36 E			90	350	
17	COMP							"	~~2~~		
18/24	FLATS x 7							[1sec TUNG]	1		
25/26	Inboard / Outboard Hartmann					3 02W	+12°	ThAr	3/2		

CCD ~~Spectr.~~ Temp. -100.5°C Dome Temp./Hum. -3.9°C / 82.7% Transparency Conditions clear but hazy

Focus 0.225

CCD ~~Spectr.~~ Temp. -101.0°C Dome Temp./Hum. -4.1°C / 85.9% @ focus test. 0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	2					ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300 Å	3			
	600	108	3"	5.58	G0V					4	KK Vis Bin	hazy. ADS9979A, brighter and NE	2.2K
	2									3			
	2000	39	3"	6.59	G1V					5	"	ADS9979B	2.3K
	2									3			
	750	96	3"	5.58	G0V	[much earlier than even F8]				4	"	A again.	
	2				A few Broad lines					3			
	6									1			
	2									3			
	75	350	3"	2	F8Ib					6	KK	2nd time tonight.	7.3K
	3									3			
	300	340		"	"					6	KK		7K
	3									3			
	90	350		"	"					6	KK	sky getting bright.	
	7									3			
[illegible]	7							600μH for FLATS		3		Flat test 7.6K	
ThAr	3/2									7/8	focus test	0 0 128 1024 8 1 for bias test	

299
Pg#1 Tues/Wed

Date 1996 MAR 12/13 Observers [KK] / Tm

Emulsion Batches:

Spectr. Temp.
Focus 0.22
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr	Seeing
CE115 27/28	Inboard/OutBoard Hartman								3/2		
29	BIAS(4)			1900							2
30	Comp							ThAr	2s		2-2.5"
31	HD47105	6 31 56	16 29 05	19 08 39		0 13 E			584	377	2-3"
32	comp							"	2s		
33	HD47105			19 19 47					181	330	
34	Comp							"	2s		
35	HD47105			19 24 53		0 05 E			89	450	2"
36	comp							"	2s		
37	comp							"	2		
38	HD59438A	7 24 49	-14 47 08	19 39 59		0 27 E			948	32	2-3"
39	comp							"	2		
40	HD59438B	"	"	19 57 45		0 12 E			792	47	2-3"
41	comp							"	2		
42	HD59438A	"	"	20 13 07		0 01 W			636	22	2"
43	comp							"	5		

CCD ~~Spectr.~~ Temp. -100.4°C Dome Temp./Hum. +1.7°C 56.7%H Transparency Conditions P-A T. Cloudy 300

Focus 0.225 unchanged despite warmer air today

Spectr. Temp. Dome Temp./Hum. +1.6°C 50.1%H

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	CCD ~~Emulsion~~	P.H.	Program	Remarks	Quality
				Echelle CCD 18.60	0300 .5795	60μ W 400μ H	6300Å	7/8	focus test	good focus? despite warmer air 0 0 128 1024 8 1 CCDFocus	
	2"							1/2		0 0 256 1024 4 1 Observing	
	2"–3"							3			
377	2"–3"	1.93	A0 IV					4	KK pym	Quite Cloudy	3K
								3			
730								5			7K
								3			
450	2"							6			
								3			
								3		(Based to Guide sl South guider slightly south of image)	
32	2"–3"	6.40	F7 V					2	KK Vis Bin	ADS 6126A	1K
								3			
47	2"–3"	7.50	N/A	(similar Sp to A)				5	"	ADS 6126 B } Guided [illegible] Perhaps	300 [illegible]
								3		(North of image to avoid South image)	[illegible]
22	2"	6.40	F7 V					2	"		
								3			

30" py#2 Tues/Wed

Date 1996 MAR 12/13 Observers [KK] / Tn

Emulsion Batches:

Spectr. Temp. ...
Focus 0.22...
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE11 5 44	BIAS(4)			20 25						~~40~~	
45	Comp							ThAr	2s	1	
46	HD86986 A	7 1409	+221000	203239		0 20W			49	10	
47	Comp							"	2		[illegible]
48	HD86986B	"	"	203510		0 39 W			1040	37	2"
49	Comp							"	2		
50	HD86986 A	"	"	205420		0 45 W			238	56	2"
51	Comp							"	2		
52	Comp							"	2		
53	HD90839	10 2414	+562936	21 0610		2 09E			573	10	2-3"
54	Comp							"	2		
55	HD90839 [SKY Rally] but lots of Em lines from it			~~21~~ 19 57		1 48E			955	5	
56	Comp							"	2		
57	BIAS (4)			21 39							
58/64	FLATS x 7			21 50		1 27W	-5°	Tung	1s		
	All copied to m:										

~~Spectr.~~ CCD Temp. −100.5 °C. Dome Temp./Hum. +1.4°C / 50.1%H Transparency Conditions Part. Clear → SUDDEN Solid Cloud

Focus 0.225

~~Spectr.~~ CCD Temp. −100.4 °C Dome Temp./Hum. +1.0°C / 53.0%H (c) 7 MAX ABOVE BIAS

Comparison Filter Exp	Exp. Mtr.	Seeing	~~Pg.~~ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	~~100~~				Echelle CCD 18·60	0300 ~~57~~95	60u 400u	6300Å	1/2			
2s	T								3			
49	100		3.55	F0 IV					2	KK Vis Bin		1.6K
2		~~2~~							3			
140	27	2"	8.18	K3 V					6	"	Cloud at end	400
2									3			
334	56	2"	3.55	F0 IV					2	"	Some cloud	
2									3			
2									3			
573	10	2"–3"	4.84	F8 V					5	Std Vel	Thickening cloud	60 only
2									3			
955	5		"	"					5	Sky Mostly		
2									3			
									1/2			
1?							600u H for Flats		3			6K
							= .205 SOT					

30³/9#3 Tues/Wed

Date 1996 MAR12/13 Observers [KK]/TG

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
ccll565	Comp							ThAr	2		
66	HD90839	10 24 14	+56 29 36	23 13 42		0 07 W			1000	27	3
67	Comp							ThAr	2		
68	BIAS(4)			23 32					.		
69	HD90839	"	"	23 33 41		0 W			637	54	3"
70	Comp							ThAr	2		
71	HD90839	"	"	23 46 08		W			257	80	
72	Comp							ThAr	2		
73	Comp							"	2		
74	HD8890	1 22 34	+88 46 26	00 13 26		9 07 W			93	225	
75	Comp							"	2		
76	HD8890			00 16 08					73	250	3"
77	Comp							"	2		
78	HD8890			00 18 26					68	235	
79	Comp							"	2		
80	BIAS(4)										

Spectr. Temp.
Focus 0.22
Spectr. Temp.

~~Spectr.~~ CCD Temp. −100.6 °C Dome Temp./Hum. +0.8°C 59% H Transparency Conditions Part. Cloudy 304

Focus 0.225

Spectr. Temp. .... Dome Temp./Hum. +00.2°C 69.5% H ☆ MAX ADU

Comparison Exp	Exp. Mtr.	Seeing	~~Plt.~~ Mag.	Sp.	Inst.	Grating/ X Tilt	Slit	~~Emulsion~~ CD	P.H.	Program	Remarks	Quality
2					Echelle CCD 1860	0300 .5795	60u W 400u H	6300Å	3			
1800	27	3"–2"	4.84	F8V		Reset H after Flats			6	Std Vel	Part Cloudy	230
2									3			
.									1/2			
637	64	3"	"	"					6	std vel		
2									3			
757	80								6	Std vel		900
2									3			
2									3			
93	425		2	F8Ib					5	Kk pym		6.2K
2									3			
73	450	3"							5			
2									3			
68	435								5			
2									3			
									1/2			

305
pg#1 Wed/Thurs

Date 1996 MAR 13/14 Observers [KK]/Tn

Emulsion Batches:

Spectr. Temp.
Focus 0.225
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
cell 581	BIAS(4)			18 40							
82	Comp			18 43				ThAr	2		
83	HD34029	5 09 18	+45 53 47	18 43 48		0 39 W			98	140	
84	Comp							"	2		
85	HD34029			18 47 46					.	130	2"
86	Comp							"	2		
87	HD34029			18 51 43					32	48	
88	Comp							"	2		
89/90	Inboard /out board			.		3 09W	+35		3/2		
91/97	FLATS x 7					2 W	+16	Tung	15		
cell 598	BIAS(4)			19 29							
99	Comp							ThAr	2		
cell 600	HD47105	6 31 56	+16 29 05	20 25 08		1 08W			612	98	3"
01	comp							"	2		
02	HD47105	"	"	20 37 03		1 25W			934	106	
03	Comp							"	2		

~~Spectr.~~ CCD. Temp. −100.2 °C Dome Temp./Hum. +3.9°C 48.2%H Transparency Conditions Hazy / part cloudy 306

Focus 0.225

Spectr. Temp. .... Dome Temp./Hum. +3.0°C 46.9%H

~MAX Annebus

Comparison Filter / Exp	Exp. Mtr.	Seeing	~~Pg.~~ ✓ Mag.	Sp.	Inst.	Grating/Tilt	Slit	~~Emulsion~~ CD	P.H.	Program	Remarks	Quality
					Echelle CCD 1860	× 0300 .5795	60u W 400u H	6300Å	1/2			
2									3		focus looks ok FWHM ~ 2.6 pixels	
98	640		0.08	65 IIIe +60 III					2	KK pgm	was there for encoder normalization.	15.4
2									3			
	630	2"							2			13.4
2									3			
32	~~4~~80								2	OHj ↓	focus test done would affect	
2									3		HD34029 observations or reductions ups fortunately	
31/2									7/8	focus test	Looks like its set for only slightly cooler, despite warm weather.	
15							60u W 600u H	For Flats	3			6K
									1/2			
5							400u H		3			
61/2	98	3"	1.93	A0 IV					6	KK pgm	part cloudy	720
2									3	m44Be same	dbl lines at 96 col 9hr Rows 482, 500	
93	206								6	"		1.6K
..									3			

307 pg #2

Wed / Thurs

Date 1996. MAR 13/14 Observers [KA] / Ta

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
CE 11604	HD 47105	6 31 56	+16 29 05	20 54 9		1 44 W			1126
05	Comp							ThAr	2s
06	BIAS (4)			21 18					
07	Comp							"	2
08	HD 8890	1 22 34	+88 46 26	22 10 45		7 16 W			509
09	Comp							"	2
10	HD 8890	"	"	22 20 45		W			1001
11	Comp							"	2
12	HD 8890	"	"	22 38 57		7 37 W			60
13	Comp							"	2
14	BIAS (4)			22 42					
15	Comp							"	2
16	wrong star. HD 90839	10 24 14	56 29 36	22 48 40		0 21 E			614
17	Comp							"	2
18	HD 90839	"	"	23 04 16		00 08 E			475
19	comp							"	2

CCD Spectr. Temp. -100.7°C Dome Temp./Hum. +1.7°C 50.6%H Transparency Conditions mostly cloudy Then clearing nicely 308

Focus 0.225

Spectr. Temp. Dome Temp./Hum. +1.6°C 52.2%H

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst. e-bolle	× Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
78	3"	1.93	A0 IV	CCD	0300 .5795	60μ 400μ	6300Å	6	kk pgm		
								3			
								1/2			
								3			
120	4"	2	F8 Ib					2	kk pgm	some cloud	1.4K
								3			
215								2	"		25K
								3			
340								2	"		
								3			
								1/2			
								3			
14	2"-3"		* very Late m?					4		STAR N W 3' From HD90839	
								3			
190	2"-3"	4.84	F8 V					5	std vel		
								3			

309
pg#3 Wed / Thurs

Date 1996 MAR 13/14 Observers [KK] / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE11620	HD90839	10 24 14	+56 29 36	23 13 32		0 08 W			866
21	Comp							ThAr	2
22	HD90839			23 36 06		0 23 W			782
23	comp							"	2
24	BIAS (4)			23 44					
25	Comp							"	2
26	HD 47105	6 31 56	+16 29 05	23 52 09		4 26 W			145
27	comp							"	2
28	HD 47105	"	"	23 56 21					178
29	Comp							"	2
30	HD 47105			00 02 25		4 37 W			62
31	Comp							"	2
32	Comp							"	2
33	HD 89484	10 14 20		00 24 49		1 18 W			82
34	Comp							"	2

CCD Spectr. Temp. −100.7 °C   Dome Temp./Hum. . . . .   Transparency Conditions . . mostly clear 3.0

Focus . . . . 0.225 . . . .

Spectr. Temp. . . . .   Dome Temp./Hum. . . . .

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	8..	165	3±5"	4.84	F8 V	Echelle 1860	0300 .5795	60μ 400μ	6300Å	5	Std Vel		1.9K
Ar	2									3			
	7.2	175								5	"		
	2									3			
										1/2			
	2									3		(west is Best only clear sky	
	45	175		1.93	A0 IV					2 5	KK pm.	and set of night.	2.9K
	2									3			
	18	280								5			
	2									3			
	62	155								5			
	2												
	2									3			
	9.5	200	3"	3.22	K1 III					4	KK Vis Bin	NW Brighter one	
	2									3			

311
pg#4

wed/Thurs

Date 1996 MAR 13/14 Observers [KK] / Tn

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
Cell 635	HD89485	10 14 28	+20 20 51	00 38 01		1 23W			248
36	Comp							ThAr	2
37	HD89484			00 33 37		1 26W			84
38	Comp							ThAr	2
39	BIAS (4)								

Comparison Filter	Exp.
	24[illegible]
Ar	2
	84
A	2

Spectr. Temp. .... Dome Temp./Hum. .... Transparency Conditions 3/2

Focus ....0.225..........

~~Spectr.~~ CCD Temp. ....−101.4 °C.... Dome Temp./Hum. ....00.8°C 55%H.... SAW new Comet again with Binoculars

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
240		3.47	G7III	Echelle		60 / 400	6300Å	2			38K
								3			
240	3"	2.22	K1 III					4			3K
								3			
								1/2			

pg # 1 [Thu/Fri]

313

Date 1996 March 14/15 Observers [KK]/Smt + Glen Gralang

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE11640/41	INBOARD/OUTBOARD							ThAr	3/2
42	BIAS (4)								—
43	COMP							"	2
44	HD47105	06 31 56	+16 29 05	21 14 40		1 54 W			128
45	COMP							"	2
46	HD47105			21 20 22		2 00 W			185
47	COMP							"	2
48	HD47105			21 26 31		2 07 W			225
49	COMP							"	2
50	COMP							"	2
51	HD79210	09 07 42	+53 07	21 45 17		0 36 W			3030
52	COMP							"	2
53	HD79211	"	"	22 38 03		1 14 W			2125
54	COMP							"	2
55	HD79210	"	"	23 15 57		1 47 W			1810
56	COMP							"	2

CCD ~~Spectr.~~ Temp. -100.4°C
Dome Temp./Hum. +4.0°C / 75.5% @ focus test.
Transparency Conditions Cleared ~19:30 a few clouds. VERY HAZY!

Focus ~~0.230~~ 0.235

Spectr. Temp. ....
Dome Temp./Hum. ....

Comparison Filter / Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	~~X~~ Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
3/2					ECHELLE 18.60	300 ℓ/mm .5795	60μm 400μm	6300 Å	7/8		0 0 128 1024 8 1	
–									1		0 0 256 1024 4 1	
2									3			
128	400		1.93	A0 IV					4	KK	γ Gem.	2.6K
2									3			
185	525		"	"					4	"		3.2K
2									3			
225	~~[illegible]~~ 560	4"	"	"					4	"		
2									3			
2									3			
3030	0	4"	7.64	M0 V					5	Kt Vis Bin	ADS7251A, 17" sep. Worse	1.3K
2									3			
2125	0	5"-8"	7.74	"					6.	"	B seeing blew up. weak.	300 above b/g
2									3			
1800	0	4"-8" at times.	7.64	"					5	"	A again. VERY HAZY, not quite foggy but close. better seeing, though	~300 above b/g
2									3			

pg #2

315 Date 1996 March 14/15 Observers [kk]/Smt + Glen Galang

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
CE11657	BIAS(4)			23 48					0		
58	COMP							ThAr	2		
59	HD8890	01 22 34	+88 46 26	00 02 51		9 04 W			100	325	4"
60	COMP							"	2		
61	HD8890	01 22 34	"	00 06 14		9 08 W			100	375	4.5"
62	COMP							"	2		
63	HD8890	"	"	00 09 24		9 11 W			100	300	
64	COMP							"	2		
65	COMP							"	2		
66	HD66751	7 59 54	+70 00	00 23 24		3 49 W			1200	0	6"
67	COMP							"	2		
68	BIAS(4)			00 47					—		
69	COMP							"	2		
70	HD90839	10 24 14	+56 29 36	00 54 59		1 50 W			610	43	5"
71	COMP							"	2		
72	HD90839	"	"	01 06 24		2 00 W			515		

CCD ~~Spectr.~~ Temp. -100.5°C Dome Temp./Hum. +2.5°C / 80.3% Transparency Conditions Very hazy → thin cloud

Focus ~~0.230~~ 0.235

Spectr. Temp. Dome Temp./Hum. +2.1°C / 82.7%

316

0 0 256 1024 4 1

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	0					ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300 Å	1			
	2									3		telescope on E side Δα -16m 43s	
	100	325	4"	2 ish	F8Ib					4	KK	α UMi	4.7K
	2									3			
	100	375	4-5"	"	"					4	KK		5.0K
	2									3			
	100	300		"	"					4	KK		5.0K
	2									3			
	2									3		telescope still on E side.	
	1200	0	6"	6.48	dF8					4	KK	2nd priority (~3rd)	
	2									3		getting cloudy.	
	–									1			
	2									3		telescope on W side now	
	600	43	5"	4.84	F8V					5	std vel.	through thin cloud	1.2K
	2									3		92% RH on catwalk and rising	
	500	100		"	"					5	std vel.	clear here now.	1.5K

317
pg #3

Date 1996 March 14/15 Observers [KK] / Smt + Glen Gabang

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
CE11673	COMP							ThAr	2		
74	HD90839	10 24 14	+56 29 36	01 16 52		2 11 W			545	10	4
75	COMP							"	2		
76	COMP							"	2		
77	HD99028	11 18 43	+11 04 49	01 33 22		1 32 W			440	15	
78	COMP							"	2		
79	BIAS(4)			01 55					0		
80-86	FLAT x 7					3h W	+15°	Tung	1		
87/88	INBOARD/OUTBOARD					"	"	ThAr	3/2		

Spectr. Temp.
Focus
Spectr. Temp.

CCD ~~Spectr.~~ Temp. -100.7°C Dome Temp./Hum. +1.9°C / 83.5% Transparency Conditions ~~mostly cloudy, foggy~~ mostly clear now weird. → cloud!

Focus ~~0.230~~ 0.235

Spectr. Temp. .... Dome Temp./Hum. 318

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	~~X~~ Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
2					ECHELLE 18.60	300 l/mm .5745	60µW 400µH	6300Å	3			
545	100	4"	4.84	F8 V					5	std vel		
2									3			
2									3			
440	15		4.03	F2 IV					6	KK	cut short due to cloud.	300 above bkg
2									3			
0									1		DOME CLOSED	
1							60µW 600µH	for flats	2			6.8K → "
3½							60µW 400µH		7/8	focus test	0 0 128 1024 8 1 end of night, set a bit warmer now	

319
pg #1

Date 1996 March 15/16 Observers [KK]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CE11689/90	INBOARD/OUTBOARD					3 10 W	+40°	ThAr	3/2
91	BIAS(4)								0
92	COMP							"	2
93	HD20902	03 17 11	+49 30 19	19 54 24		3 52 W			200
94	COMP							"	2
95	HD20902	"	"	19 59 42		3 57 W			190
96	COMP							"	2
97	HD20902	"	"	20 04 10		4 02 W			200
98	COMP							"	2
99	COMP							"	"
CE11700	HD8890	01 22 34	+88 46 26	20 17 09		5 23 W			150
01	COMP							"	2
02	HD8890	"	"	20 22 00		5 28 W			150
03	COMP							"	2
04	HD8890	"	"	20 26 00		5 32 W			190
05	COMP							"	2

CCD ~~Spectr.~~ Temp. -100.4 °C   Dome Temp./Hum. -1.1 °C / 57.5% @ focus test   Transparency Conditions: clear now, a few clouds to the south.   320

Focus 0.230

Spectr. Temp.   Dome Temp./Hum.

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	λ Grating/ Tilt	Slit	cλ ~~Emulsion~~	P.H.	Program	Remarks	Quality
r	3/2					ECHELLE 18.60	300 l/mm .5195	60μ W 400μ H	6300 Å	7/8	focus test	0 0 128 1024 8 1	
	0									1		0 0 256 1024 4 1	
1	2									1		GPIB error induced by overfilling keyboard buffer. Reset AKER and Hamilton.	
	200	525	5"	1.79	F5Ib					2	kK	α Per. some thin clouds	6K
	2									3			
1	190	590	4"	"	"					2	"		6K
	2									3			
	200	555		"	"					2	"		5.3K
	2									3			
	"									3			
	150	327	4"-3"	~2	F8Ib					4	kK		3.9K
	2									3			
	150	345		"	"					4	kK		4.8K
	2									3			
	140	309		"	"					4	kK		4.7K
	2									3			

pg #2

Date 1996 March 15/16 Observers [KK]/Smt

Emulsion Batches:

CCD ~~Spectr.~~ Temp. ...

Focus ... 0.

Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
CE11706	BIAS(4)							~~[illegible]~~	0		
07	COMP							ThAr	2		
08	HD79210	09 07 42	+53 07	20 42 00		0 44 E			1705	36	3"
09	COMP							"	2		
10	HD79211	"	"	21 13 41		0 13 E			1730	37	3"
11	COMP							"	2		
12	HD79210	"	"	21 44 10		0 07 E			232	6	3"
13	COMP							"	2		
14	HD79210	"	"	21 50 47		0 23 W			1640	44	3"
15	COMP							"	2		
16	BIAS(4)			22 20					0		
17	COMP							"	2		
18	HD47105	06 31 56	+16 29 05	22 27 54		3 11 W			120	35	3"
19	COMP							"	2		
20	HD47105	"	"	22 31 42		3 15 W			120	[illegible]4	4"

CCD ~~Spectr.~~ Temp. -100.7°C Dome Temp./Hum. -2.7°C/59.2% Transparency Conditions clear

Focus 0.230

Spectr. Temp. .... Dome Temp./Hum. .... cλ 0 0 256 1024 4 1

Companion Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	Grating/Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	ADU max above bias
	0					ECHELLE 18.60	300 ℓ/mm .5795	60μW 400μH	6300Å	1			
	2									3			
	1765	36	3"	7.64	M0V					5	KK Vis Bin	ADS7251A, 17" sep, W one	400
	2									3			
	1730	37	3"	7.74	M0V					6	"	ADS7251B, 17" sep, E one	570
	2									3			
	232	6	3"	7.74	M0V					5	"	~~A again~~ B again, oops. E one.	100
	2									3			
	1640	44	3"	7.64	M0V					6	"	A this time W one	530
	2									3			
	0									1			
	2									3			
	120	435	3"	1.93	A0IV					4	KK	γ Gem	33K
	2									3			
	120	364	4"	"	"					4	KK		30K

322 pg #3

Date 1996 March 15/16 Observers [KK] / Smt

Emulsion Batches:

Spectr. Temp.

Focus 0.2

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp	Exp Mtr	Seeing
CE11721	COMP							ThAr	2		
22	HD47105	06 31 56	+16 29 05	22 35 35		3 20 W			170	450	5"
23	COMP							"	2		
24	COMP							"	2		
25	HD62509	07 39 12	+28 16 04	22 45 07		2 20 W			60	570	4"
26	COMP							"	2		
27	HD62509	"	"	22 47 36		2 22 W			60	460	4-5"
28	COMP							"	2		
29	HD62509	"	"	22 50 00		2 25 W			60	450	5"
30	COMP							"	2		
31	COMP							"	2		
32	HD89~~485~~484	10 14 28	+20 20 51	22 58 13		0 01 E			125	300	4"
33	COMP							"	2		
34	HD89485	"	+20 20 49	23 02 23		0 09 W			450	255	4"
35	COMP							"	2		
36	HD89484	"	+20 20 51	23 12 13		0 13 W			125	575	4"

~~Spectr.~~ CCD Temp. -100.6°C Dome Temp./Hum. -3.3°C/61.4% Transparency Conditions clear

Focus 0.230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	~~Grating/~~ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
Ar	2					ECHELLE 18.60	300 ℓ/mm .5795	60μW 460μH	6300Å	3			
	170	450	5"	1.93	A0IV					4	KK	γ Gem	3.7K
	2									3			
	2									3			
	60	520	4"	1.14	K0IIIb					2	KK stdvel	β Gem, not primary stdvel. though	8.0K
	2									3			
	60	460	4"-5"	"	"					2	"		8.0K
	2									3			
	60	450	5"	"	"					2	"		6.4K
	2									3			
	2									3			
	175	200	4"	2.22	K1III					5	KK Vis Bin	ADS7724A, brighter and NW	4.7K
	2									3			
	450	255	4"	3.47	G7III					6	"	ADS7724B, fainter and SE	4.7K
	2									3			
	175	275	4"	2.22	K1III					5	"	A again.	

325 pg #4

Date 1996 March 15/16 Observers [KK]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
CE11737	COMP							ThAr	2
38	BIAS (4)			23 18					0
39	COMP							"	2
40	HD99028	11 18 43	+11 04 49	23 29 26		0 23 E			740
41	COMP							"	2
42	HD99028	"	"	23 43 32		0 09 E			740
43	COMP							"	2
44	HD99028	"	"	23 58 13		0 06 W			755
45	COMP							"	2
46	BIAS (4)			00 13					0
47	COMP							"	2
48	HD90839	10 24 14	+56 29 36	00 20 57		1 23 W			800
49	COMP							"	2
50	HD90839	"	"	00 36 03		1 39 W			840
51	COMP							"	2
52	HD90839	"	"	00 51 24		1 53 W			801

CCD ~~Spectr.~~ Temp. -100.7°C   Dome Temp./Hum. -3.4°C/60.0%   Transparency Conditions clear

Focus 0.230

Spectr. Temp. ....   Dome Temp./Hum. ....

0 0 256 1024 4 1

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	λ Grating/ Tilt	Slit	~~Emulsion~~ cλ	P.H.	Program	Remarks	Quality
Ar	2					ECHELLE 18.60	300 l/mm .5795	64μW 400μm	6300Å	3			
	0									1			
	2									3			
	740	216	4"-5"	4.03	F2IV					4	KK		4K
	2									3			
	740	245	4"	"	"					4	KK		4K
	2									3			
	755	300	4"	"	"					4	KK		3.8K
	2									3			
	0									1			
	2									3			
	800	286	3"-4"	4.84	F8V					2	std vel		2.2K
	2									3			
	845	228	4"	"	"					2	"		1.5K
	2									3			
	80[illegible]	248		"	"					2	"		1.6K

327 pg #5

Date 1996 March 15/16 Observers [Kk]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Mtr	Seeing
CE11 753	COMP							ThAr	2		
54	BIAS (4)			01 10					0		
55-61	FLAT x 7					3 08 W	+27°	Tung	1		
62	BIAS (4)			02 40					0		
63	COMP [not correct HD# noted Apr 22/96 Tn] corrected new Tn							ThAr	2		
64	HD120 ~~746~~ 476 Tn A	13 44 36	+27 29	02 44 07		0 37 W		"	1320	27	3"
65	COMP							"	2		
66	HD120 ~~746~~ 476 Tn B	"	"	03 08 32		1 07 W		"	1700	29	2.3"
67	COMP							"	2		
68	HD120 ~~746~~ 476 Tn A	"	"	03 39 06		1 33 W			1400	[illegible]	3"
69	COMP							"	2		
70	BIAS (4)			04 04					0		
71	COMP							"	2		
72	HD131156A	14 46 46	+19 30 57	04 10 52		0 44 W		"	275	[illegible]	3"
73	COMP							"	2		
74	HD131156B	"	"	04 18 39		1 07 W			117[illegible]	[illegible]	3"

~~Spectr.~~ CCD Temp. -100.7°C Dome Temp./Hum. -3.9°C/58.2% Transparency Conditions clear 328

Focus 0:230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
fr	2					ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300Å	3			
	0									1			
ny	1							60μW 600μH	for flats	3			5.6K
	0							60μW 400μH		1		{ Viewed Comet C/1996 B2 took <u>very</u> weak spectrum of ~~pro~~ nucleus (~9-10 mag) }	
fr	2									3		pair is better separated in finder!	
	1350	27	3"	7.59	dK6					5	KK Vis Bin	ADS9031A, sl brighter and N	(350)
	2									3		HUGE grazing cosmic ray.	
	1700	29	2"-3"	8.03	N/A					6	"	B, sl fainter and S	250
	2									3			
	1400	26	3"	7.59	dk6					5	"	A again	250
"	2									3			
	0									1			
"	2									3			
	275	68	3"	4.74	G8V					2	KK Vis Bin	ADS9413A, brighter and SE	600
"	2									3			
	1170	38	3"	6.90	K5V					4	"	B, fainter and NW	

329
pg #6

Date 1996 March 15/16 Observers [Kk]/Smt

Emulsion Batches:

Spectr. Temp. ...
Focus 0.2
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	... Mtr.	Seeing
CE11775	COMP							ThAr	2		
76	HD131156A	14 46 46	+19 30 57	04 40 03		1 16 W			425	00	4"
77	COMP							"	2		
78	BIAS(4)								0		
79	COMP							"	2		
80	HD138918	15 30 01	+10 52 23	05 15 51		1 06 W			290	12	4"
81	COMP							"	2		
82	HD138917	"	+10 52 19	05 22 25		1 18 W			640	26	
83	COMP							"	2		
84	HD138918	"	+10 52 23	05 34 53		1 24 W			240	05	4"
85	COMP							"	2		
86	COMP							"	"		
87	HD137909	15 23 42	+29 27 01	05 44 00		1 39 W			160	8	4"
88	COMP							"	2		
89	HD137909	"	"	05 47 56		1 43 W			185	[illegible]	

Spectr. Temp. – Dome Temp./Hum. -5.9°C / 59.8% Transparency Conditions clear

Focus 0.230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	ADU max above bias
Ar	2									3			
	425	100	4"	4.74	G8V					2	KK Vis Bin	ADS9031A again.	750
	2									3		GPIB error again, same reason as earlier – keyboard buffer intolerance, ∴ last cap was a bit late.	
	0									1			
	2									3			
	296	112	4"	4.20	F0IV					4	KK Vis Bin	ADS9701A, brighter and N.	750
	2									3			
	640	126		5.20	(BSC) dF0					5	"	ADS9701B, fainter and S.	650
	2									3			
	240	105	4"	4.20	F0IV					4	"	A again, sky getting brighter now	650
	2									3			
	"									3			
	[illegible]	108	4"	3.66	F0p					6	KK	(β CorBor or) β CrB	650
	2									3		Dawn approaching fast.	
	[illegible]	148		"	"					6	KK		1000

331
pg #7

Date 1996 March 15/16. Observers [KK]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11790	COMP							ThAr	2
91	HD137909	15 23 42	+29 27 01	05 52 23		1 48 W		"	200
92	COMP							"	2
93	BIAS(4)			05 57					0
94/95	INBOARD/OUTBOARD					3 15 W	+29°	"	3/2

Spectr. Temp.
Focus 0.
Spectr. Temp.
Mtr. | Seeing
138 | 3-4"

CCD ~~Spectr.~~ Temp. -101.0°C   Dome Temp./Hum. -6.8°C / 61.39%   Transparency Conditions clear, dawn almost here...

Focus 0:230   332

Spectr. Temp. ....   Dome Temp./Hum. ....

0 0 256 1024 4 1

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	~~Quality~~ [illegible] above bias
	2					ECHELLE 18.60	300 l/mm .5795	60μW 400μH	6300Å	3			
	200	138	3"-4"	3.66	F0p					6	KK	β CrB, very bright star.	800
	2									3			
	0									1			
	3/2									7/8	focus test	0 0 128 1024 8 1 set a bit wayne, but it is the end of the night.	

333 pg #1 [Sat / Sun]

Date 1996. March 16/17. Observers [Hml]/Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr.	Seeing
CE11796/97	INBOARD/OUTBOARD					3 13 W	+46°	ThAr	3/2	20V	
98	BIAS(4)								0		
99	COMP							"	2		
CE11800	HD27561	04 15 54	+14 11	19 52 27		3 27 W			1835	24	4"
01	COMP							"	1		
02	HD27561	"	"	20 28 56		4 01 W			1800	910	4-5"
03	COMP							"	1		
04	BIAS(4)			21 01					0		
05	COMP							"	1		
06	HD27561	"	"	21 04 33		4 36 W			1800	610	4"
07	COMP							"	1		
08	HD27561	"	"	21 37 27		5 10 W			1801	580	5"
09	COMP							"	1		
10	HD27561	"	"	22 13 02		5 45 W			1800	137	5"
11	COMP							"	1		

Spectr. Temp.
Focus 0.2
Spectr. Temp.

~~Spectr.~~ CCD Temp. -160.4°C Dome Temp./Hum. -1.0°C/43.8% @ focus test Transparency Conditions clear

Focus 0.230

Spectr. Temp. Dome Temp./Hum.

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~ cλ	P.H.	Program	Remarks	Quality
	3/2	1320V no filter				ECHELLE 18.13	300 l/mm .5685	60μW 400μH	6520Å	7/8	focus test	0 0 128 1024 8 1	
	0								~~apparently~~ very close actually. took a while to verify through.	1		0 0 256 1024 4 1	
	2									3		telescope is on E side of piers.	
	1835	1024	4"	5.61	F4V					4	Hml		1.5K
	1									3			
	1500	910	4"-5"-3"	"						5	"		1.3K
	1									3			
	0									1			
	1									3			
	1800	610	4"	"	"					6	"		1.0K
	1									3			
	1500	580	5"	"	"					4	"	better focus, I guess.	1.3K
	1									3			
	1800	137	5"	"	"					5	"	had to leave dome, so this exposure was VERY poorly guided.	~~500~~ 460
	1									3			

335
Pg #2

Date 1996 March 16/17 Observers [Hml]/Smt

Emulsion Batches:

CCD Spectr. Temp. ...
Focus ... 0.2
Spectr. Temp. ...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE11812	BIAS(4)			22 46					0		
13	COMP							ThAr	1		
14	HD99984	11 25 07	+43 43 20	22 57 24		0 40 E			1800	3460	2"
15	COMP							"	1		
16	HD99984	"	"	23 31 50		0 06 E			1800	3465	<2"
17	COMP							"	1		
18	BIAS(4)			00 04					0		
19	COMP							"	1		
20	HD99984	"	"	00 07 02		0 30 W			1800	3525	2"
21	COMP							"	1		
22	BIAS(4)			02 00					0		
23-32	FLAT x 10					3 07 W	+14°	Tung	1		
33/34	INBOARD/OUTBOARD					"	"	ThAr	3/3		

CCD ~~Spectr.~~ Temp. -100.5°C Dome Temp./Hum. -3.2°C / 57.5% Transparency Conditions clear

Focus 0.230

Spectr. Temp. Dome Temp./Hum.

0 0 256 1024 4 1

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
0	1320 V no filter				ECHELLE 18.13	300 ℓ/mm .5685	60μ W 400μ H	6520 Å	1			
1									3		telescope back on W side of piers again.	
1800	3060	2"	5.94	F4 V					6	Hml	never done before	4K
1									3			
1800	3465	<2"	"	"					4	"		4.3K
1									3			
0									1			
1									3			
1800	3525	2"	"	"					5	Hml		4.2K
1									3			
0									1		Dome closed.	
1							60μ W 600μ H	for flats only	2			8K
3 3									7/8	focus test	0 0 128 1024 8 1	

pg 337 #1 [Sun/Mon]

Date 1996 March 17/18. Observers [Hml] / Tn / Smt

Emulsion Batches:

Spectr. Temp.

Focus ...... 0.2?

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr.	Seeing
CE11835/36	INBOARD / OUTBOARD							ThAr	3/3	1320 V	
37	BIAS (4)			19 00					0		
38	COMP							"	1		
39	HD68146	08 06 02	-13 30 18	19 14 31		1 00 E			1815	2080	3"
40	COMP							"	1		
41	HD68146	"	"	19 46 47		0 27 E			1800	1935	2-3"
42	COMP							"	1		
43	BIAS (4)			20 21					0		
44	COMP							"	1		
45	HD68146	"	"	20 23 43		0 11 W			1920	1500	3"
46	Comp							"	1		
47	Comp							"	1		
48	HD87141	9 57 58	54 22 32	21 03 14		1 11 E			1448	3340	2-3"
49	comp							"	1		
50	HD87141	"	"	21 03 14		0 44 E			1482	5220	2"
51	Comp							"	1		

Spectr. Temp. -101.7°C Dome Temp./Hum. +1.0°C / 37.4% Transparency Conditions clear and dry

Focus 0.230 @ focus test

Spectr. Temp. .... Dome Temp./Hum. -0.6°C / 50.9%H

...mparison ...lter Exp	Exp. Mtr.	Seeing	✓ ~~Ptg~~ Mag.	Sp.	CCD Inst.	✓ Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
3/3	1320 ✓ no filter				ECHELLE 18.13	300 l/mm .5685	60μW ?mH	6520Å	7/8	focus test	0 0 128 1024 8 1	
0									1		0 0 256 1024 4 1	
1									3			
1815	2080	3"	5.54 ~~[illegible]~~	F6V					4	Hml	(< 300/1 S/N near center)	4.5K
1									3			
1800	1935	2-3"	"	"					5	Hml	(some thin cloud >200/1 S/N center)	3.0K
1									3			
0									1	~~Hml~~		
1									3			
[illegible]	1500	3"	"	"					6	Hml		
1									3			
1									3			
14[illegible]	3340	2-3"	5.74	F5V					4	Hml/pgm	<300/1 S/N	5.2K
1									3		maxmin →	14.9K
14[illegible]	4,220	2"	✓	"					5			6 K
1									3			

339 Pg#2 Sun/mon

Date 1996 MAR 17/18 Observers [Hml]/Tn/Smt

Emulsion Batches:

CCD Spectr. Temp. –

Focus 0.230

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp Mtr	Seeing
CE11852	BIAS(4)			21 56					0	[illegible]	
53	comp							ThAr	1		
54	HD 113337	12 57 53	+64 08 51	22 08 25		2 57 E			1800	3270	<2"
55	comp							"	1		
56	HD113337	"	"	22 40 32		2 24 E			1820	2820	2"
57	COMP							"	1		
58	HD113337	"	"	23 13 16		1 52 E			1772	3930	<2"
59	COMP							"	1		
60	BIAS(4)			23 45					0		
61	comp							"	1		
62	HD100563	11 29 15	+03 36 56	23 52 02		0 15 W			1800	3100	2-3"
63	comp							"	1		
64	HD 100563	"	"	00 24 23		0 48 W			1869	2830	3"
65	comp							"	1		
66	HD100563	"	"	00 56 53		1 20 W			1813	[illegible]	
67	comp							"	1		

~~Spectr.~~ CCD Temp. −101.0 °C Dome Temp./Hum. −0.4 °C / 49.9 % Transparency Conditions Clear in North, some thin clouds in South

Focus 0.230

Spectr. Temp. .... Dome Temp./Hum. ....

0 0 256 1024 4 1

Comparison Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. Echelle	Grating/Tilt ×	Slit	Emulsion	P.H.	Program	Remarks	Quality
0	1320 V no filter				CCD 1811 3	0300 .5685	60 u W	6520 Å	1/2			
1									3			
1800	3270	<2"	6.00	F6 V					4	Hml		4.7K
1									3			
1800	2820	~~<~~2"	"	"					5	Hml	I guess the seeing/focus wasn't as good as I thought.	3.8K
1									3			
1800	3930	<2"	"	"					6	Hml	better focus now	5.5K
1									3			
0									1/2			
1									3			
1800	3100	2-3"	5.77	F5 V					4	Hml		3.1K
1									3			
1800	2830	3"	"	"					5	Hml		3K
1									3			
[illegible]	2120		"	"					6	Hml		2.7K
1									3			

34) pg#3 sun/mon

Date 1996 MAR17/18 Observers [Hm?]/Tn./Smt

Emulsion Batches:

CCD Spectr. Temp. -/

Focus 0.23

Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp	Exp Mtr	Seeing
CE11868	BIAS(4)			01 29					0		5
69	HD100563	11 29 15	+03 36 56	01 30 19		1 52 W			1711	811	3"
70	Comp							ThA	1s		
71	Comp							"	1s		
72	HD 130945	14 45 45	+46 31 58	02 04 30		0 48 E			1800	1500	2-3"
73	Comp							"	1s		
74	HD130945	"	"	02 35 52		0 16 E			1800	1400	2-3
75	comp							"	1s		
76	BIAS(4)			03 07					0		
77	HD130945	"	"	03 08 37		0 15 W			1708	1370	2-3"
78	Comp							"	1s		
79	HD130945	"	"	03 38 16		0 46 W			1800	1535	2"
80	Comp	"	"					"	1s		
81	BIAS(4)			04 10					0		
82	COMP							"	1		

CCD Temp. -100.4 °C Dome Temp./Hum. -1.4°C 53.2% H Transparency Conditions Clouding in

Focus 0.230

Spectr. Temp. .... Dome Temp./Hum. ....

Comparison Filter / Exp	Exp. Mtr.	Seeing	Plg. Mag.	Sp.	Inst. Echelle	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0		3"			CCD 18.13	0300 .5685	60uW 400uH	6520Å	1/2			
1711	1111	3"	5.77	F5V					2	Hm/		
1/5									3			
1/5									3			
1500	1500	2-3"	5.74	F5V					4	Hm/ pgm	<200/1 S/N PART Cloudy ≈35 K photons	1.6K
1/5									3			
1500	2400	2-3"	"	"					5	"	clearing 250/1 SN 60 kphotons	33K
1/5									3			
0									1/2			
1738	3370	2-3"	5.74	F5V					6	"	[>200/1 S/N] 50 kphotons	2.5K
1/5									3			
1800	5535!	2"	"	"					2	"		7.5K
1/5									3			
0									1			
									3			

343
pg #4

Sun/mon

Date 1996 March 17/18 Observers [Hml]/Tn/Smt

Emulsion Batches: ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CE11883	HD168151	18 13 19	+64 21 48	04 21 20		2 09 E			930
84	COMP							ThAr	1
85	HD168151	"	"	04 38 45		1 58 E			600
86	COMP							"	1
87	COMP							"	"
88	HD173667	18 41 21	+20 27 02	04 55 00		2 08 E			900
89	COMP							"	1
90	HD173667	"	"	05 11 19		1 51 E			940
91	COMP							"	1
92	BIAS(4)			05 28					0
893 - 902	FLATS x 10					3 10 W	+21°	TUNG	1
CE11903/04	INBOARD/OUTBOARD					"	"	ThAr	3/3

Spectr. Temp. −101.7°C Dome Temp./Hum. −1.2°C / 51.4% Transparency Conditions clear
cloud at end

Focus 0.230

Spectr. Temp. .... Dome Temp./Hum. −1.4°C / 51.4%H for focus test. 0 0 256 1024 4 1

Comparison Filter	Exp	Exp. Mtr. 1320✓	Seeing	Mag.	Sp.	CCD Inst.	X Grating/ Tilt	Slit	~~Emulsion~~ λc	P.H.	Program	Remarks	Quality
	930	5090	2"	5.03	F5 V	ECHELLE 18.13	300 l/mm .5685	60μW 400μH	6520Å	4	Hml	150K photons in middle order ~400:1 S/N itself.	>10K
Ar	1									3			
	600	3100	<2"	"	"					5	"		
	1									3			
										3			
	900	5040	<2"	4.19	F6 V					4	Hml	Some cloud ~120K photons ⇒ 350:1 S/N in middle order	8.5K
	1									3			
	900	3,100	2-4"	"	"					5	"	Some more cloud	5.5K
	1									3			
	60									1			
[illegible]	1							60μW 600μH	for flats only	3			8K
Ar	3[illegible]							60μW 400μH		7/8	focus test	twilight and mostly cloudy. 0 0 128 1024 8 1 still perfectly in focus.	

345
pg#1 Mon/Tues

Date 1996 March 18/19 Observers [Rm]/Tn/Smt + Mki & 3 grad. students

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.	Exp. Mtr.	Seeing
CC39A 14/15	Inbound/outbound		hartman					FeAr Chave	30/30		
16	BIAS(4)										
17	Comp							FeAr Chave	30		
18	HD 44990	6 19 49	+70 8 25	20 48 24		2 00 W			380	750	5"
19	Comp							"	30		
20-24	FLAT x 5					2 10 W	+7°	1/4 tp Twg	5		
25	BIAS(4)			21 06					0		
26	Comp							FeAr Chave	30		
27	HD 62509	7 39 12	+28 16 04	21 26 31		1 14 W			179	1750	
28	Comp							"	30		
29	BIAS(4)			21 33					0		
30	BIAS(4)			23					0		
31	COMP							"	30		
32	HD103095	11 47 13	+38 26 10	00 00 57		0 11 E			623	2125	3"
33	COMP							"	30		

(CO) Spectr. Temp. ...
Focus 6.82
Spectr. Temp. ...
No V
GG 560
Filter

CCD Spectr. Temp. -100.2°C Dome Temp./Hum. +4.2°C/68.6% Transparency Conditions mostly cloudy

@ focus test

Focus 6.82

FANS ON @ 23:30.

Spectr. Temp. .... Dome Temp./Hum. ....

412 0 50 1024 4 1

Comparison Filter	Comparison Exp	Exp. Mtr.	Seeing	Pg. ✓ Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ CCD	P.H.	Program	Remarks	Quality
Ar	30/30	1000 ✓ OG 560				CASS CCD	1800 l/mm G=5960	306μ	6399Å	3/4	focus test		
		Filter								1/2			
Ar	30									5			
	30	750	5"	B 6.5 -8.0	F7Iab -K1Iab					6	Run pgm	T mon cloudy	
	30									7 ~~8~~			
	5									8		clouded in completely.	11.5K →
	0									1		β Gem isn't visible.	
Ar	30									9			
	17	1750		✓ 1.14	K0IIIb					10	std vel	In cloud	
	30									11			
	0									1			
	0									1			
	30									12			
	[illegible]	2925	3" but turbulent.	✓ 6.45	G8Vp					13	std vel	very hazy.	5K
	30									14			1.7K

pg 34#2

Date 1996 March 18/19 Observers [Rm] / Tn / Smt

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC 39434	BIAS (4)			0 14					0
CG80400-03	HD103095 x 4	11 47 13	+38 26 10						.067
04/05	" x 2				00 23	0 02 E	84° Alt		.133
~~CC39435~~	~~Comp~~								
	~~Vesta~~								
CC 39435/36	INBOARD/OUTBOARD							FeAr clear	30/30

Focus 6.8

Seeing: ~4", very turbul

~~Spectr.~~ CCD Temp. -100.4°C Dome Temp./Hum. +2.4°C / 67.6% Transparency Conditions hazy 348

Focus 6.82 FANS ON (NE only by now).

Spectr. Temp. Dome Temp./Hum. +2.2°C / 412 0 50 1024 4 1 ccdfnt

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
	0	OG560 Filter				CASS CCD	1800 ℓ/mm G=5960	306μ	6399Å	1		Airport wind N 13 Kms	
	.067		~4"	6.45	G8V p	EEV CCD TV GUIDER		above 306μm	±4.5Å	—	Seeing Test	Dome west, hazy,	
	.133		very turbulent, tough.							—	"	~~N wind 13 km/h.~~	
										~~15~~			
				~~6.8~~	~~G2V~~	~~reflected~~					~~for Std Vel~~	~~Hazy~~ too cloudy.	
	30, 30									15/16	focus test	Dome closed.	

34a
pg #1 SAT/SUN

Date 1996 MAR. 23/24 Observers [Vys.]/Tn

Emulsion Batches: ORDER Separate For Comps GG385 Filter OG ~~550~~ Filter

CCD Spectr. Temp. —
Focus 6.97
Spectr. Temp.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp Mtr	Seeing
CC 394 37/38	Inboard/outboard Hartman					0 26W	+41	FeAr clear	40/45	No Filter	
39	BIAS (4)										
40	Comp							FeAr clear	40		
41	HD 36395	5 26 18	-03 41 00	19 46 42		2 11 W			335	1280	4"
42	Comp							"	40		
43	Comp							"	40		
44	HD ~~258726~~ SAO 59184	6 32 06	J2000 +34 35 19	20 00 55		1 25W			360	1150	
45	Comp							"	40		
46	HD 258728	6 35 30	1900 34 37 00	20 11 30		1 57W			1628 ~~1255~~	1755	3"
47	Comp							"	40		
48	BIAS (4)			20 41							
49	Comp							"	40		
50	BD+33 1646A	08 02 34	1900 +33 06 25	20 47 13		0 43 W			893	1150	3"
51	Comp							"	40		
52	BD+33 1646B	"	"	21 05 44		1 18 W			1859	[illegible]	3"
53	Comp							"	40		

CCD Spectr. Temp. -101.7 °C Dome Temp./Hum. 0.0°C 55%H Transparency Conditions Fine 350

Focus 6.97

Spectr. Temp. Dome Temp./Hum. -2.1°C 60%H

397 0 50 1024 4 1 CCD ADU MAX

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~	P.H.	Program	Remarks	Quality
no Filter				CASSCCD	1200 G4503 1st ORDER	30Bu	6495Å	3/4	focus test	Set for slightly cooler.	
				No ORDER Separation Filter used in this case.				1/2			
								5			2.5K
1280	4"	7.97	M1					6	Marcy std vel		3.5K
								7			
								8			
1150		8.2	K2	Late Through				9	Brighter	Fld star error	1.7K
								10			
1255	3"	9.8	M0					11	Vys 475	Deltas look good using 1950+ pr motion coords?	2.7K
								12			
								1/2			
								13			
650	3"	≈11	M0					14	Vys 250A	NE and much Brighter of Pair	Hα Em 2.4K
								15			
360	3"	12.1	M0					16	Vys 250B	SW one } Hα Em Gauss?? Very Strong	Hα Em 1.9K
								17			

35) pg#2 SAT/SUN

Date 1996 MAR 23/24 Observers [Vys.] Ju. Hα

Emulsion Batches: GG385 ~~OG550~~ Filter in

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
CC39454	BIAS(4)			21 40					
55	Comp						Ap:-	FeAr Clean	40s
56	HD77175A	8 5548	+15 4100 (1900)	21 48 48		0 52W			861
57	Comp							"	40s
58	HD77175B	"	"	22 0611		1 09 W			855
59	Comp							"	40s
60	Comp							"	40s
61	Vys 573	10 11 52	+12 717 (1900)	22 35 15		0 34 W			
62	Comp							"	40s
63	BIAS(4)			2302					
64	Comp							"	40s
65	Vys 125	10 19 42	+77 4354 (1950 + PR motion)	23 14 05		1 05W			1564
66	Comp							"	40s
67	Comp								
68	HD 103095	11 4713	+38 2610	23		0 13E			87
69	Comp								

Spectr. Temp. ... Focus .... 6.97 Spectr. Temp. ...

Mtr	Seeing
960	3"
940	3½"
970	4"
920	4"
900	

CCD Spectr. Temp. -100.4°C Dome Temp./Hum. .... Transparency Conditions Only slightly hazy
Comet Hyakutake very nice and bright.

Focus 6.97

Spectr. Temp. .... Dome Temp./Hum. ....

Exp. Mtr.	Seeing	Pg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	CCD ~~Emulsion~~	P.H.	Program	Remarks	Quality
				CASSCCD	1200 l/mm G4503	306μ	6495Å	1/2		Previous grating wrong i.e. 1800	
								18			
960	3"	~8.0	M0p	Looks M type				19	Vys 264 A	slightly brighter	1.9k
								20	and N of	close pair. sep ≈ 8"	
740	3-4"	9.0	M0p	Looks late				21	Vys 264B		1.7K
								22			2.4k
								23			
340	4"	11.0	M0	Late, K type? anyway				24	Vys pgm	not previously done at Hα	
								25			
								1/2			
								26			
620	4"	10.3	M0	looks right.				27	Vys pgm	Digital Hd checks well.	1.4k
								28			
1200		6.5	G8Vp					6 6	Std vel	for seeing test	
								7			

=Pg#3
353 SAT/SUN

Date 1996 MAR 23/24 Observers [Vys. Ht] Tn

Emulsion Batches:

GG 385

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
CG80 406/09	HD103095	11 4713	+382610						4x67ms
CG80 10/11	"					0007E			2x133ms
70	Comp		1950+ pr motion 50yR					FeAr Clear	40s
71	Vys 605	11 1130	+521603	000515		01 07 W			
72	Comp							"	40s
73	BIAS(4)			00 35					
74	Comp							"	40
75	HD95735	10 5754 (1900)	36 3800	004541		1 36 W			171
76	Comp							"	40
77/85	FLATS x9					0 17W	36°	TUNG Ap1/4	2s
87	Comp							FeAr Clear	40s
88	Hyakutake	14 41	41°	01 1447					165
89	Comp							"	40s
CC34490	BIAS (4)								

CCD Spectr. Temp. −101.7°C Dome Temp./Hum. −2.6°C 60%H Transparency Conditions Fine to slightly hazy

Focus 6.97

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3"–4"	6.5	G8Vp			306μ ABOVE				Dome SW, medium	
									ALT 83°	N W wind	
				CASS CCD	1200l G4503	306μ	CA 6495Å	8			
330	3"	11.4	M0					9	Vyspgm	Encoder error Fine	
								10		Digital Field checks nicely	
								11/12			
								12			
1100		7.48	M2						Marcy std		
								15			
I think	after	no	ORDER	separation	used for Flats			29			11K
	1e GG	385	taken out	for Flats	To MAR 27						
	AS stars	not	done with	order	separation						
			Filter. ~~as planned~~.					27	(Head mainly)	Tail upper Left ~~Something~~ In guide view	5.5K Aure
	It's	Intended	not to ORDER	separate	for these	Red	stars.				
				All on D:	To–CDROM						

355

Emulsion Batches:

....

....

....

Date .... Observers ....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Ex